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# THE AMERICAN JOURNAL OF CLINICAL MEDICINE

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*Au Revoir*

To Dr. Herman J. Achard on his Departure  
to California

*MAY* Good Luck take her widest broom  
And sweep your pathway clear.  
May men extend you honor  
And women hold you dear.

*MAY* children run to meet you;  
May enemies be few;  
And may the blessing of the Gods  
Descend on what you do.

*THEN*, when your Sun is setting,  
And shadows gather grey,  
May some loved spirit kiss your lips  
And waft your soul away.

G. H. C.

June, 1924.

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# *The American Journal of* **CLINICAL MEDICINE** *Dependable Therapeutic Fact for Daily Use*

Vol. 31, No. 6

June, 1924

## Doctor Achard Leaves for California

IT is with extreme regret that we announce that Dr. H. J. Achard, who has been a member of the editorial staff of *CLINICAL MEDICINE* for many years and who, as managing editor, has had active charge of the destinies of the *JOURNAL* for a long time, is leaving Chicago to make his home in California. But, while we make this statement, we are happy to tell our readers that Doctor Achard has not entirely severed his connection with the *JOURNAL*. He will serve it in an associate editorial capacity, and we hope we shall continue to receive many interesting articles from his pen.

Doctor Achard leaves hosts of friends in Chicago, and every one of his editorial and business colleagues is sorry to have him go. All of us join in wishing him continued success in his professional life, with a broadening circle of intimate friendships as he goes to another environment. Doctor Candler has happily expressed the feeling of all of us in the sentiment which appears in the mortise of this issue of our *JOURNAL*.

ALFRED S. BURDICK.



"California, here I come!"

### "FRIENDS OF MEDICAL PROGRESS"

A few months ago, a letter signed by Charles W. Eliot, President Emeritus of Harvard University and honorary president, "Friends of Medical Progress, Inc.," was sent out from which we reproduce the following:

"Within the last fifty years, many societies have been organized to prevent the advancement of medical science by experimental methods, to break down the bulwarks of preventive medicine, and to substitute for the scientific treatment of disease various forms of pseudo-science and quackery. We are in a position to know that these organizations have reached the danger point. It must be fully understood that, if this antimedical program should succeed, the hands of the doctors would be tied and no further progress in experimental medicine could be expected. No reliable insulin would be available for diabetes, no antitoxin would be possible for diphtheria or lockjaw, no vaccine could be procured to protect the country against smallpox, and it would be utterly impossible to test such essential drugs as ergot, pituitrin and digitalis.

"With a view, therefore, to resisting the efforts of these societies, there has been organized and incorporated the 'Friends of Medical Progress'. This national lay organization will undertake to inform the public of the truth concerning the value of scientific medicine to humanity and to animals, and will oppose legislation dangerous to public health. By so doing, it will perform a highly important function; hitherto assumed with difficulty, as a civic duty, by the medical profession.

"The society hopes to extend its influence throughout the United States. How far it will be able to do this, depends upon the response of the public."

"The Friends of Medical Progress, Inc.," has established its headquarters at 28 Newbury Street, Boston, Mass., and counts many prominent men among its honorary and acting officers. We mention Mr. Ernest Harold Baynes, a former friend of the antivivisection movement, but who wanted to know and went to find out what actually happened in institutions in which animal experimentation is utilized for the purpose of assuring further progress—and then he published the story of what he found in *The Outlook* and in the *World's Work*. Needless to say, he resigned from the antivivisection society. Other prominent members are President Angell, of Yale University; Mr. Hughes, secretary of state; Bishop Mann, of Pittsburgh; Cardinal O'Connell, of Boston, among many others. The society has a lay advisory board, whose members are prominent in their particular lines, and a medical advisory board on which some of the most noted physicians in the country serve.

The members of the society of "Friends of Medical Progress" may belong to various groups, from associate members to "benefactors" involving contributions of annual payments of \$1.00 up to single payments of not less than \$5,000. Between these two, there are various forms of membership suitable for the various sizes of our pocketbooks.

This society has published some authoritative literature in which the actual acquisitions of medical progress with the aid of animal experimentation are set forth honestly and without bias and in which neither falsehood nor perversion of truth are resorted to (as is constantly done in the antivivisection propaganda literature). There is really no need to change the simple story of facts, because these facts speak so impressive a lesson and justify animal experimentation so fully as to make it impossible for any straight-thinking man or woman to condemn this entirely proper mode of investigation. Furthermore, it is quite self-evident that the various brutalities and atrocities that are claimed to occur in these laboratories are NOT practiced—not only because the investigators themselves are honest men and women who love animals and would not cause them needless suffering, but also because, by abusing these animals, they would defeat their object and would not be able to accomplish their work.

We want to urge all physicians to join the "Friends of Medical Progress, Inc." (the associate members pay \$1.00; contributing members \$5.00 per annum) and we also want our friends to talk to their lay friends and to urge them to join this splendid movement which is doing its best to counteract the sinister forces that are endeavoring, for their own selfish ends, to halt further progress in medical sciences and to endanger the lives, not only of our families, our wives and children, but also those of the very animals for whom they pretend to entertain such great love.

Pride seems to be equally distributed; the man who owns the carriage and the man who drives it seem to have it just alike.—H. W. Shaw.

### ARROGANCE

There is a kind of arrogance that is indulged in by most of us, at some time or other; and that is, the expressing of definite opinions about things that we do not understand. We may suggest to a patient, who is suffering with an infectious disease, that a course of vaccine treatment is indicated in his case. Many times he will come back at us with the assertion:



"I don't believe in vaccines."—How so? What right has he to state definitely that, in his opinion, vaccine treatment as such is wrong? What does he know about it?

The Inquisition did not believe in Galileo's discoveries. Today, nobody doubts them (excepting Mr. Voliva, of Zion City). Harvey's colleagues did not believe in the circulation of the blood, as discovered by him. The fact remained the same despite the doubt of the authorities, who pronounced definite opinions without having the requisite knowledge that would entitle them to such pronouncements.

To revert to the instance of vaccine therapy. It is actually in keeping with some of nature's secrets, with her ways of doing things that have been discovered by close study of natural processes. It is an artificial aid to boost nature in her work when, for reasons of ill health, she can not do that work unaided. Who, then, has the right to assert that he does not believe in it?

Or we may take the use of anesthetics in labor. You remember that Simpson was bitterly assailed for his temerity to run counter to the (alleged) law of God, when he employed chloroform to render childbirth painless, in contravention of the biblical "in sorrow thou shalt bring forth children." The physicians of his day, and still more the clergy, did not believe in anesthetics for that purpose. Today, the idea of painless childbirth is accepted generally.

"We are wont to see people sneer at that which they do not understand." When Goethe voiced that truth, he might have added—or what they do not wish to understand, refusing to investigate it. Usually, those people who "do not believe in" this or that, have never taken the trouble to study the problem, never attempted to investigate, to gain an understanding of its nature. They make up their minds, on a snapshot impression, and that's that. A thing is thus and so, to them, no matter what may be the merits of the case; immaterial of what is the actual truth.

The funny part of it is that, the more ignorant a man (including woman), the more set he is in his opinions and views. The more he has studied, the more he knows, the less becomes his daring in stating definite views about things that are still *sub judice*. He who has real, true knowledge, is humble, not arrogant. Arrogance is a characteristic of ignorance.

We find the parallel in all sorts of conditions. The young graduate in medicine knows far more, is much more assertive and

positive than he will be after ten or twenty years of practice. After a long life devoted to the study of sick people, to research, to searching after truth, he is much more humble, he dares to say, "I do not know." The young and ignorant are intolerant. The old and wise are tolerant and forbearing. But, preserve me from an old and *unwise* age with its bigoted, narrow notions and set opinions!

Recently, a woman of 68 consulted a young physician because of a nervous affection. She had, in fact, exophthalmic goiter and the acute phase was unmistakable. The doctor took her to the hospital for observation and, then, declared that operation was the only resort. Naturally, the patient was frightened. The husband talked to an old physician of his acquaintance and begged him to meet his wife's attendant in counsel; which was agreed to. It developed, during the consultation, that the attending physician had not intended to have the thyroid gland removed, but only to ligate the superior thyroid arteries. Although the consultant admitted that, ultimately, that might become advisable, he urged strongly a waiting policy, putting the patient on absolute bed rest and mental rest, and watching developments. The young physician was so angry that he got up, turned his back on the consultant and walked off without even taking leave of him. Nevertheless, the patient was told that she would not have to submit to operation, and the relief that that remark afforded her helped much in assuring her recovery. She had been frightened terribly by the thought of operation. The attendant very properly gave up the case, since he insisted on operation and the patient refused to accept his advice. He had even sent the interne to urge the patient, causing her to have a wretched night. The patient now is doing well and will not have to submit to surgical treatment of any kind.

Arrogance of mistaken knowledge? Intolerance? Bigotry? Terrible impediments in the path of progress.

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Greatness stands upon a precipice, and if prosperity carries a man never so little beyond his poise, it overbears and dashes him to pieces.—Seneca.

### "A QUESTION OF MECHANICS"

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Doctor Larsen's article, under the same title as this editorial, illustrates and demonstrates the necessity of preventive medicine in a manner that can not but appeal to the reader. As a matter of fact, such discussions should really be given publicity in popular

rather than in medical journals. And, yet, it may be well for many of us to have the argument outlined in a form that satisfies our own reason and that will fortify us when we are called upon or have an opportunity to discuss the problem with laymen who, after all, are most to benefit from preventive medicine.

While there can be no argument, in the last instance, as to the necessity rather than the desirability of periodic physical examinations, especially in people who have passed middle life, it may be well for us physicians to take the lesson to heart in our own behalf and to realize that we, as guardians of the health of others, are not above the operation of physical laws. It is a good thing for the teacher to scan and memorize his own lessons and to obey their behest. It is just as important for a medical man to subject himself to periodic physical examinations as it is for any layman.

You may say that, being a physician, you can recognize incipient signs of impending trouble and, when they do occur, you can act upon the warning. My dear doctor; that is very true theoretically. Practically, it does not work out, as you well know. Haven't you neglected frequent attacks of vertigo, or palpitation, or attacks of indigestion? Haven't you, on casual investigation, found some traces of albumin in your urine? What have you done about it? Didn't you put it off, thinking that—"well, it won't amount to much, anyway!"?

How often does it happen that a physician will pass by certain symptoms in his own person concerning which he would warn his patient seriously of impending trouble.

It is far from my intention to say: "Physician, heal thyself." We know that the physician who treats himself, like the lawyer who handles his own case, has a fool for a client. What I do mean to impress upon my colleagues is the necessity existing for physicians, as well as for other people, to put themselves into the hands of physicians in whose ability to make a complete physical examination and in whose judgment regarding the results they have the utmost trust; and, then, to abide by the result and to take such measures, in case any irregularity is found, as will be best regulated to remedy the trouble and to ward off more serious consequences.

The custom of periodic annual, semi-annual or quarterly physical examinations is a good one. Sensible people are easily impressed with their necessity and, already, many visit their physicians at stated intervals, just as they call upon their dentists for the purpose of such

examinations. They consider this justly as a proper form of buying health insurance and as an excellent investment. The important point is, of course, that any indications calling for remedial action, that may be found on examination, be actually met and that the results of the examinations be accepted in their full bearing.

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Health lies in labor, and there is no royal road to it but through toil.—Wendell Phillips.

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### THE PERSONAL FACTOR

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In offering a discussion of Surgical Problem No. 15 (CLINICAL MEDICINE, March, page 185) concerning a California physician, whose illness of many years' duration had been diagnosed variously and who, consequently, had been subjected to diverse methods of treatment, one of our correspondents says that he has felt timid about expressing himself because it is very hard to weigh a subjective symptom from another's description. He continues: "One often gets unconscious impressions from a patient from the way he describes his sensations, from his manner, posture, expression, etc., which frequently suggest points that you might not otherwise consider. For example, I must admit that I was somewhat misled by your description of that pneumonia case, although I had had two similar cases this winter and there was nothing wrong with the description. There is something about keeping your attention concentrated on the patient, observing him as an individual, that helps to overcome preconceived notions."

Here is a point the importance of which we do not always realize sufficiently. It is related to the custom of almost all physicians, in their consultation rooms, to place their patients so that the light strikes them fairly well, while the doctor turns his back to it. It is not only the posture, the facies, the manners and mannerisms of the patient that prove enlightening, but it is especially the gestures that the patient employs in pointing out places where he feels discomfort or pain. For instance, in some forms of pain, the patient may point or place his hand on his body very gingerly and cautiously; in other forms, he presses his hand firmly on the painful place. A disseminated ache is apt to be indicated by a rotary movement over that region of the body with the open hand, the fingers spread out. A sharply-localized pain is pointed to with the index finger.

The expression of the face is particularly

an open book for the experienced clinician. You will find many physicians watching the patient's face closely on palpating abdomen or other localities where pain is complained of. This, of course, is especially true for children; but it holds for grown-ups likewise.

Our correspondent says truly that there is something about keeping your attention *concentrated* on the patient. It is only by actual concentration, by close study of him, with eyes, hands and ears, that we can discover all those physical, objective signs that may exist and can evaluate the subjective symptoms that are complained of.

### MOVE YOUR BOWELS AT NIGHT

The best time for cleaning out the rectum is, at night, just before retiring. Oh, yes, I know. For years, we have been taught, and have instructed our patients to use every effort to have a good bowel movement every morning, say, after breakfast. Patients will tell us, or some fellow who boasts of his splendid health, will inform us, that their bowels move, like clock-work, every morning on rising or after breakfast, as the case may be. They feel quite chesty about it, too; like the chap who takes a cold tub every morning and everlastingly boasts about it. I do, myself; I mean, taking a cold bath or shower; but, I do not make a nuisance of myself on that score; I never boast about it, never annoy my friends with that wonderful performance. \* \* \* Well, eh, hardly ever. (Yes, I remember!)

However, no matter how satisfactory it may be to clean out the human cesspool every day, in the morning, there is a way that is still better, and that is, at night, before retiring. Why? Let's see. In the morning, the contents of the rectum are discharged that have been accumulating all the previous day and during the night. Then the contents of the large bowel have a chance to push on, down, into the descending colon, to the sigmoid flexure. Sometimes, they will go farther and, possibly, a second voiding occurs during the day. So much the better. Mostly, though, habit has brought it about that the peculiar association of circumstances, that sequence of events that impresses it upon our subconscious that there is some garbage to be emptied out, does not come about again until next morning. Especially during the night time, that descending colon and even the upper rectum are filled with feces, often being put on a stretch, when they would be much better off if there were nothing in them and their tired

muscles might have an opportunity to relax.

Take the better way; that of cleaning out at night. All day long, the contents of the bowels have been pushing down and down, aided by the upright position that we, naturally, assume during waking and working hours. Then, on retiring, the rectum is cleaned out. The time just before going to bed is conducive to deliberate action; there is no hurry, no train or car to be caught; nobody waiting for you—except the bed. The mind is much more at rest. So, plenty of time may be taken for this important operation. Even that quantity of feces that has accumulated in the descending colon has a chance to descend further down, into the rectum, and to be expelled.

Now, the lower end of the intestinal tube is empty (or should be). On assuming the horizontal position, the muscles of colon and rectum are loose, relaxed. They have a chance to rest; they are not kept at a stretch as is the case when the bowel is filled with feces.

More sensible? I say, yes. Much more sensible. Know what happens to a rubber band that is kept at a stretch all the time? The intestinal muscles are not exactly rubber bands, but, often, they might as well be. Certainly, if they never have a chance to rest, they *must* get very tired. In fact it is my opinion that many cases of constipation are made worse by our failure to defecate at night; and, reversely, I am satisfied, partly from experience, that many cases of constipation can be cured by adopting the habit of timing the defecation properly: on retiring.

It may be learned, easily enough. No straining is necessary, only a sufficient degree of concentration on the task on hand. We know that, in most cases, we can bring about the act of defecation by thinking of it, and without straining. In refractory cases, a small (one pint, not more) enema of cool water may be taken in the sitting posture (the only condition in which an enema should be taken in that position!), to start things. That will bring action, with a rush. And, not only the water will come down, but whatever else may be in the lower bowel.

Of course, the habit may not always be acquired easily. It may take time. Still, it is one of the most sensible things—it seems to me—that we can accustom ourselves to; and, surely, it is worth the effort. That it can be done, I have demonstrated many times since the matter came to my mind and since I reasoned it out.

Constant complaint is the poorest sort of pay for all the comforts we enjoy.—Franklin.

## THE PROPER TIME FOR LAXATIVES

Usually, we order laxative drugs to be taken at night, on retiring, so as to let them "work while you sleep" and secure a movement of the bowels the next morning. That's all wrong.

I have said, in another editorial, that the best time for cleaning out the rectum and lower colon is, at night, on retiring. It follows that, whatever assistance is given, by means of drugs, to secure that daily movement, should be timed so as to become active at night. In some patients, a laxative taken at noon will work just about at bedtime. In others, one's daily tasks may be sadly disarranged by an unforeseen urge toward privacy.

However, the part of wisdom will be, to instruct our patients to observe the number of hours a certain laxative drug requires to act. If that time is two hours, the proper time for taking the drug is, after the evening meal. If the action is more protracted, the mid-afternoon, or even the noon hour may be the proper period. At any rate, it is not enough to dispense some A. S. & B. pills and say, take these as you need them. It is futile, if you want to cure constipation, to instruct your patient to take mineral oil, occasionally. Better tell him to "watch and wait." Let him take note of the time that passes between dose and effect. Then, let him space the dose so that the effect will come at the proper period.

In persons with established habits, the time for defecation may vary by several hours, according to the course of events. For instance, take a man who is preparing for bed. He will take off his clothes; then he will wash hands and face, or take his bath if he is accustomed to the evening tub. Then the teeth are brushed, the mouth is rinsed out, etc., etc., until, finally, the bladder is emptied. Now is a good time to remain seated and attempt to bring about further developments. As I have said elsewhere, no straining should be indulged in; only a mental effort—the physical result will follow, in time. It is possible to accustom ourselves to it. What I mean is, that the course of events—undressing, washing, sitting down to empty the bladder and the rectum—can become as much a habit as every other habitual act or series of acts.

Now, if artificial assistance is required, the drugs need not be so very drastic in action. A slight stimulation will usually suffice. The effect will come when the events take their course. Habit is a great thing. Isn't it?

## THE SEMINAR IDEA

The solutions offered for the last few Surgical Problems, in the Surgical Seminar, have produced such an "embarrassment of riches" that Doctor Blech found it difficult to select those replies that should be published and those that might be left out. Naturally, we are delighted at the success which this Seminar is at last experiencing and we hope sincerely that the interest will not flag but that it will be maintained in the future.

Under the circumstances, we are confronted by some points rather difficult to decide. It is quite impossible to include all discussions submitted to the Seminar. Yet, some of them are entirely too good to be left out. So, we have taken a way out by printing a few of the discussions (especially those that relate to older problems) in the "Let's Talk It Over" department, as independent communications. We believe that, in this way, our purpose will be served fully as much and that all of us will be stimulated to continued study by these separate communications.

Incidentally, we can not but refer once more to our old pet idea of establishing a Medical Seminar that shall run parallel to its surgical sister department. We realize the difficulties; and, yet, it seems to us that a Medical Seminar would be just as useful, that it would stimulate thought and study and discussion just as much as does the other department.

Once more, what do the readers think about it? Will they help?

When the million applaud you, seriously ask yourself what harm you have done; when they censure you, what good!—Colton.

JOHN PRESTON SUTHERLAND  
"FESTSCHRIFT"

The "Festschrift" idea is gaining ground in this country and is to be commended. A *Festschrift* is a publication in honor of some scientist whose services and acquirements are celebrated during his lifetime, usually on the occasion of a birthday at an advanced age. It is customary, in Germany, for the pupils of notable clinical teachers to bring out a special issue of some medical periodical to which this teacher had liberally contributed, and to dedicate this particular issue to him as a *Festschrift*. The contributors themselves are well-known men, and their tribute to their honored teacher is a graceful one. We recall the *Festschriften* in honor of Virchow, of Kussmaul, to mention only one. In this country,

William Osler and Abraham Jacobi were honored in a similar manner.

There is before us a reprint of the memorial number of the *Boston Medical and Surgical Journal* for February 21, 1924, which is a *Festschrift* honoring Dr. John Preston Sutherland, Dean Emeritus of Boston University School of Medicine, on the occasion of his birthday, he having completed the seventieth year of his life. The fourteen contributions to this special issue were written by pupils and associates of Doctor Sutherland and cover a wide range of subjects. We join the *Boston Medical and Surgical Journal* in offering our tribute and our sincere good wishes to Doctor Sutherland.

### THE METRIC SYSTEM

#### A Good Thing, But It Is Probably a Long Way Off

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One of New York's recent commissioners of weights and measures urged the importance of the metric system—a system that would do for us in our weights and measures what the decimal system does for us now in money.

Each of us knows how much better it is to have a dollar divided into one hundred cents than to have something like the English pound, with its shillings, pennies and ha-pence. The metric system, which is the decimal system under another name, saves time.

It would save as much time in weights and measures as it does in money.

But those of us that are grown up KNOW and understand our present old-fashioned, stupid system. We do not know the metric system.

And being grown up, and having control, we do not want the trouble of LEARNING.

If the next generation could make laws, we should have the metric system tomorrow, for it would save the next generation time and trouble.

But, dull and reluctant to learn as we are, the metric system will probably have to wait until the next generation, and then perhaps until the next.

The foregoing item was clipped from the *Chicago Evening American*, for April 29. It is so true as to require no confirmation. We are agreed that the metric system would be far better, much more simple and (ultimately) much easier to learn—if only we older ones

could make up our minds to accept the transitory difficulties and bother to get accustomed to the change. The continental European nations accepted the metric system years ago, the English-speaking people fight against its adoption—because, forsooth, it is too much trouble. Funny world, this!

The wise prove, and the foolish confess, by their conduct, that a life of employment is the only life worth leading.—Paley.

### WHAT A LAYMAN THINKS OF DOCTORS

"Why do doctors so often make mistakes? Because they are not sufficiently individual in their diagnosis or their treatment. They class a sick man under some given department of their nosology, whereas every invalid is really a special case, a unique example. How is it possible that so coarse a method of sifting should produce judicious therapeutics? Every illness is a factor or complex, which is multiplied by a second factor, invariably complex—the individual, that is to say, who is suffering from it—so that the result is a special problem, demanding a special solution, the more so the greater the remoteness of the patient from childhood or from country life.

"The principal grievance which I have against the doctors is, that they neglect the real problem, which is, to seize the unity of the individual who claims their care. Their methods of investigation are much too elementary; a doctor who does not read you to the bottom is ignorant of essentials. To me, the ideal doctor would be the man endowed with profound knowledge of life and of the soul intuitively divining any suffering or disorder of whatever kind, and restoring peace by his mere presence. Such a doctor is possible, but the greater number of them lack the higher and inner life; they know nothing of the transcendent laboratories of nature; they seem to me superficial, profane, strangers to divine things, destitute of intuition and sympathy. The model doctor should be at once a genius, a saint, a man of God."—("The Journal Intime" of Henri-Frederic Amiel, Scheveningen, August 22, 1873.)

### LENGTHENING LIFE THROUGH INSURANCE HEALTH WORK

We have before now referred to the notable work that is being done by the Metropolitan Life Insurance Company which, for fifteen



years, has carried on organized health work among its industrial policy-holders. The results of this prophylactic work are very notable and certain reductions in mortality illustrated in the pamphlet under consideration during the eleven years, from 1911 to 1922, represent a total saving of 173,925 lives and of nearly \$36,000,000 in death claims. These figures, of course, have to be corrected by considering the improvement in the mortality of the general population during these years. But, even with this correction, there may be credited to the welfare work of the company a total saving of 141,559 lives and of over \$28,000,000 in death claims.

It would be foolish to assert that the Metropolitan Life Insurance Company was the only gainer in this saving of death claims. Through the avoidance of disease and death, and policy-holders saved more money even than would have had to be paid out by the Metropolitan Life Insurance Company if the death claims had become due. The value of this health work is great and it is finding imitators all over the country, to the great advantage of the people.

### AN INQUIRY INTO FAITH HEALING

"There have been so many loose claims as to what may be accomplished by mental healing, faith healing, anointing, divine healing, or spiritual suggestion, that it is refreshing and valuable to have a careful, far-minded analysis of one series of such experiments. We have before us the report of a committee in Vancouver summing up the results of a healing campaign in that city carried on a year ago by the Rev. C. S. Price. Mr. Price called his treatment faith healing, and declared that divine power was directly operative, placing also great emphasis on the patient's faith. The committee recognizes cordially the fact that bodily and mental health are capable of being influenced for good by mental or spiritual means. It does not deny that benefit was obtained by some of the patients, but points out that, out of 350 cases which the committee followed up with care, only five could be classed as cures. Those cases and others in which the patients benefited more or less largely from the treatment were cases of functional rather than organic trouble. The distinction is important: in organic disease, structural change in some organ or in some part of the body actually exists; examples are tuberculosis, cancer, diabetes. In functional disease there is no organic change; the

symptoms usually arise from nerve action or from conditions which are subjective rather than physical; shell shock is a notable example of functional disease.

"The Vancouver committee was made up of eleven ministers of different denominations, eight doctors who were church members and were specialists in different directions, three college professors of scientific attainments, and a prominent lawyer of the city. The report shows that the range and variety of cases investigated was very large. About fifty diseases were included in the claims of the patients and the faith healer.

"It is not denied that spiritual benefit and moral stimulus were drawn by some patients from the treatment, but nothing appeared that indicated that the treatment could be regarded as a substitute for ordinary medical care, investigation, and treatment, wherever actual physical disease existed.

"That such a faith-healing campaign is inevitably accompanied by an aftermath of disappointment and actual injury, was shown by the investigation. There were no fewer than nine cases where insanity ultimately followed the treatment; there were thirty cases of marked depression following failure to receive permanent and continued benefit; there were thirty-nine cases in which death resulted despite the expressed belief at first that the patient was benefited. A typical case of this kind was that of a young woman who had been under treatment for diabetes; after she was anointed by the faith healer, she became hopeful and confident, discontinued medical treatment, but a few months after died of diabetes, as was inevitable from the first. In addition to these cases of death, there were seventeen cases found by the committee which were distinctly worse instead of better after the anointment because proper medical treatment was neglected. And, in 215 cases, there was no positive result at all.

"If there has been any investigation of the actual results of faith healing on a scale at all comparable with this inquiry in Vancouver, or carrying such evidence of thorough study by competent and fair-minded men, we have failed to note it. The conclusion is not that there is no hope in mental healing, for that already exists largely in the scientific treatment of disease, but that an attempt to apply it in a sensational way without regard to the character of the disease is a dangerous and very often an injurious experiment. The Vancouver committee declare their firm belief that health is a gift from God, that the laws

of the body and mind as revealed by modern science are a divine revelation, and that any attempt to establish a treatment, by whatever name it may be called, in which these laws are openly or tacitly ignored is contrary to good sense, to sound morals, and to genuine religion." [From *The Outlook*, April 16, 1924.]

The foregoing article is reproduced verbatim from *The Outlook* because it is so excellently prepared as to be preferable to any abstract that we might produce. The question of divine healing is an important one. Some misguided ministers of the Gospel and one entire denomination, owing allegiance to the Christian religion, contrast "divine healing" with healing under the guidance of a physician in such a manner that it may be inferred that the work of the physician is opposed to the divine way of doing things, that it is not in keeping with religious tenets and, in short, objectionable. Such a peculiar view is not only insulting to the medical profession collectively and individually, but it betrays a mental twist that is anything but flattering to those urging "divine healing" as superior to the ministrations of a physician and more in accordance with God's teachings.

Those people who are so very certain of their full cognizance of God's teachings are, as a matter of fact, not very strong in their faith in his All-Wisdom. Surely, they must admit, as a *sequitur* of God having created the world, that He established natural laws. That being granted, they are not logical, or even very devout, in expecting God to run counter to his own laws by acting against them, by granting special privileges to some (at the request of a preacher, of course, or of a healer) while denying them to others.

On the other hand, physicians, who have carefully studied Nature's laws, act in accord with them in their treatment of disease, and do their best to restore health by reestablishing natural processes. They do not claim the impossible—that which is clearly opposed to Nature's laws. They do not assert that they can restore a broken-down lung or a destroyed kidney or a cancerous organ to their normal condition. They do not pretend that they can *cure* organic diseases in the sense of restoring the diseased organs to normalcy, but only attempt to establish the best functioning power possible under the circumstances. That is to say, they try to bring about a *clinical cure*, which is not always identical with a physiological cure. Surely, a far more modest position than those claiming to be able to bring about divine healing.

The serious consequences of these fallacies of faith-healing are well put forth in the report. We physicians can not but rest content with our less pretentious but more possible ways of doing, and we are satisfied to go on working *with* nature, doing that which is possible and not attempting to force nature into unnatural ways. To our way of thinking, Nature's methods are more divine than are unnatural methods.

Great minds, like heaven, are pleased in doing good, though the ungrateful subjects of their favors are barren in return.—Rowe.

### THE PHYSICIAN'S RIGHT OF SELECTING PATIENTS

A few months ago, one of the Brooklyn (N. Y.) papers carried an article headed, in bold face:

## Doctor Rebuked For Neglecting Woman in Peril

### Magistrate Denounces Physician Who Wouldn't Attend Mother at Childbirth Unless Paid Fee First

It appears that a physician practicing in Brooklyn refused to answer a call to attend a woman in childbirth unless his fee was assured and paid partly in advance. The doctor's reason was that, three years ago, he had attended a sister-in-law of his client and had been done out of his fee.

The patient's husband and relatives showed their displeasure by breaking the doctor's house door and by doing other mischief. The doctor had the man arrested and brought into court on a charge of malicious mischief. Thereupon, the magistrate, Mr. O'Neill, in Coney Island Court, went out of his way to insult the doctor (who was fully within his legal rights) by delivering himself of the remark:

"This is one of the most outrageous cases ever brought to my attention. You are a disgrace to your profession and you should be reported so that your certificate might be revoked."

Somehow, we can not understand for what reason the attitude of the physician in question should have been characterized as "most outrageous" and why Magistrate O'Neill should feel impelled to call the doctor a disgrace to his profession and to recommend that his license to practice should be revoked.

It appears to us that Magistrate O'Neill exceeded the limits to which he might properly go in voicing his displeasure at an occurrence of which he could hardly understand the nature. If he had really comprehended the true merits of the case and if he were an upright and fair-minded judge, he could not possibly have become guilty of such discourteous language. As a matter of fact, his remarks are, in our opinion, unjustified and impertinent.

What are the merits of the case? The doctor had served this family before and had been refused his just remuneration. Under these circumstances, one can hardly blame him for not wishing to be victimized again and for refusing attendance unless he were assured of his fee beforehand. If the patient had been in immediate danger of death and if there had not been other physicians available who might have been called, the doctor would have been culpable. As it is, he had a perfect right to act as he did and no magistrate was justified to use the objectionable language in which Mr. Magistrate O'Neill indulged.

The tendency to victimize physicians by demanding prompt services without assuring them of equally prompt compensation is altogether too prevalent. People should understand that they can not call physicians without paying for their services. Certainly, the tactics of the woman's husband and relatives, who vented their displeasure by destroying the doctor's property, was anything but commendable and was far more deserving of criticism than was the doctor's behavior.

Finally, we protest against the attitude of the newspaper in featuring this story to the disadvantage of the doctor in question. The heading of the article throws discredit not only upon the doctor but upon the medical profession. This was not justified in any way, and the tendency of newspapers to arouse antagonism against the medical profession is not only undignified but is culpable.

#### OUR COLLEAGUE, THE PHARMACIST

Recently, a series of radio talks was given over WLAG, on the relations of the pharmacist and the public, by Mr. Frederick J. Wulling. Mr. Wulling praised the training for preparation that the student in pharmacy has to undergo and discussed the problems of the graduate pharmacist. He also talked at length about the problems of the druggist and of the pharmacist, of the various methods in

which the requirements of the public regarding sick-room supplies of all kinds are filled, and entered into the question of the modern drug store and of its more recent development, the so-called purely professional pharmacy.

It is the latter that interests us as physicians most immediately. For many years, the physician has looked with some disfavor at the development that had taken part in the old corner drug store out of which mercantile establishments had grown where everything could be purchased and which even had eating counters attached to them. In recent years, the neglect that the prescription counter suffered almost unavoidably in these drug stores has been a matter of grave concern not only to physicians but to pharmacists themselves and a movement has made itself felt tending to the dissociation of the purely pharmaceutical phase of these undertakings from their more commercial activities.

Mr. Wulling outlines the division between the merchant pharmacist and the professional pharmacist and shows how the tendency is, for the purely professional pharmacist to assume again his proper position, namely, that of associate to the physician whose prescriptions he fills and to whom he can be of service in many ways in the matter of producing and procuring the best possible remedial agents for the benefit of the doctor's patients.

The business place of the professional pharmacist will be known as a pharmacy or a pharmaceutical laboratory and will be located, as many now are, in office buildings or in places where rents and overhead are at the minimum. The practitioner will be a professionally-trained person known by the title of pharmacist. The ranks will include women as well as men. Physicians will be in close cooperation and in frequent consultation with the pharmacists, to the end that both may become enabled to render superior service. The place of business devoted to trade in such drugs and preparations whose sale is not restricted to registered pharmacists will be on busy streets in prominent locations suitable for retail trade.

Another significant evidence of the trend of pharmacy is found in the decision of the American Pharmaceutical Association to undertake a campaign for the raising of one million dollars for the erection of a Pharmaceutical Headquarters Building. The campaign is already under way, but, as soon as the organization has been completed, the drive

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# Leading Articles

## The Employment of Arsphenamine

### And Its Derivatives in the Modern Treatment of Syphilis

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#### CURABILITY OF SYPHILIS

**SYPHILIS** is a disease very difficult to treat. Starting with an invasion of spirochetes at the point of inoculation, it soon becomes generalized—changing into a chronic, systemic affection capable of involving any or several organs of the body at the same time. Experiments of Brown and Pearce<sup>1</sup> in rabbit syphilis indicate that generalization of a syphilitic infection may take place as early as 48 hours after inoculation. As Hazen<sup>2</sup> properly states, syphilis is not a benign disease and many deaths occur as the result of it. However, the mortality caused by the disease now is much lower than what it used to be ten or fifteen years ago. This is due to the employment of such powerful remedies as arsphenamine and its derivatives and to the much greater knowledge as to the cause, character, manifestations and diagnosis of the disease. Likewise, due to the wide and judicious employment of the Wassermann and other tests for the diagnosis of syphilis, the disease is detected much sooner and in cases where it was not suspected at all. The arsphenamines, too, are being improved continually and new remedies added to the armamentarium of the syphilologist.

As to the number of syphilitic cases actually cured, it is difficult to say. Such a statistical study requires observation running through three or more decades. Some syphilologists are confident that cures are obtained not infrequently, while others take a more pessimistic view. According to the latter, all that can be done for a syphilitic is temporary sterilization of the body, with the subsequent return of the infection as a result of the renewed activity and multiplication of a strain

of spirochetes which had originally escaped the destructive effect of the therapeutic agent. Speaking of curability, therefore, the term is to be understood either in the sense of complete cure or of a prolonged state of sterilization.

The curability of syphilis depends, in large measure, on the time when treatment is instituted. The earlier the treatment, the greater the possibility of cure. Hence, a higher percentage of patients is cured in the primary and secondary stages of the disease. If the infection has been neglected for some years or the patient has received inadequate treatment, the spirochetes become so firmly entrenched in various parts of the body that they prove far more resistant to drugs used against them. Likewise, if the disease has been treated with too small doses or at too long intervals or with inefficient remedies, the spirochetes may undergo certain biological changes, increasing their virulence or affinity for various tissues. Such strains of spirochetes, according to some syphilologists, are apt to do particular damage to the nervous system, producing symptoms of neurosyphilis (Plaut and Mulzer)<sup>3</sup>. Curability, also, appears to be influenced by the anatomical location of spirochetes in the body—this factor possibly being determined to some extent by the strain of the infecting organism. Then, of course, curability depends on the individual resistance of the patient to the infection and the extent of the production of defensive antibodies.

It is almost universally agreed that the arsphenamines are the remedies of dominant value. They are far ahead of any other class of compounds in the almost magic rapidity

with which they control the active symptoms, in their ultimate effect on the Wassermann test, and in the scientific evidence (obtained experimentally on animals) of their high affinity for spirochetes. Mercury—for several centuries regarded as the basic remedy in syphilis—must still be recognized as a therapeutic agent of value, but one of secondary importance.

#### **Arsphenamine or Neoarsphenamine**

On the question of choice between arsphenamine and one of its derivatives, there is a difference of opinion. The chief determining factors should be the chemotherapeutic index (relation of maximum tolerated dose to minimum therapeutic dose) of the particular drug employed and the manner in which this drug is clinically tolerated. On this basis, in our estimation, neoarsphenamine is to be preferred. A single dose of 0.9 Gm. neoarsphenamine is generally considered the therapeutic equivalent of 0.6 Gm. of arsphenamine—the latter, however, being 2 to 3 times as toxic as the former. Arsphenamine contains about 30 percent arsenic while neoarsphenamine contains about 20 percent. All things being equal, we believe that therapeutic agents with decreased arsenical contents are more desirable. Although comparisons of the drug effects, in parallel stages of syphilis over a given period, have indicated that neoarsphenamine necessitates generally a third again as many treatments as arsphenamine, there is this compensation: there is much less likelihood of toxic disturbance, and treatment in many cases may be prolonged—a thing admitting of more satisfactory end-results. Again, the chemotherapeutic index of neoarsphenamine—due to improvement in its manufacture—has been increasing and is considerably higher than that of arsphenamine. Thus, because the newer arsenical is less toxic and therefore less likely to produce reactions, and also because the technic of its administration is simpler, physicians throughout the world are using more neoarsphenamine than arsphenamine. There are, however, some prominent syphilologists who believe arsphenamine to be more efficient than neoarsphenamine and therefore, prefer to employ it, in spite of its admittedly higher toxicity.

The advantages of neoarsphenamine may therefore be summed up as follows:

1. It is a neutral compound possessing about the same hydrogen-ion concentration as the blood. Its injection into the blood-stream, therefore, causes less biochemical disturbance, both in the blood and tissues, than the

strongly-alkaline solution of arsphenamine, the hydrogen-ion concentration of which is different from that of the blood.

2. Neoarsphenamine in the ordinary concentrations employed is not hemolytic, except in very dilute solutions or in extremely concentrated solutions, while arsphenamine is hemolytic in virtually all concentrations in which it is used.

3. Neoarsphenamine is more rapidly soluble and may be used in much greater concentration; consequently, the solution may be given in a glass syringe. Arsphenamine, on the other hand, is given from a burette by the gravity method. The preparation, too, and the technic are much less elaborate in neoarsphenamine and the possibility of error, therefore, is less.

4. Neoarsphenamine, experience demonstrates, is tolerated by the patient much better than arsphenamine. Reactions are both, rarer and milder, when they do occur and, consequently, interruption of treatment is less likely.

5. Neoarsphenamine is almost invariably preferred by the patient, since there is less pain, less trauma (finer needle), risk, reaction and time consumed.

#### **Methods of Treatment**

The newer methods of treating syphilis have been employed but little more than a decade. Sufficient time has not elapsed for the development of a crystalized therapeutic program acceptable to the great majority of syphilographers. The selection of the remedy, the dosage, the frequency of administration, the number of treatments in a course, the number of courses, etc., are all matters determined by the physician for himself. Certain general propositions, however, have been suggested by those who have had the widest experience in the treatment of syphilis.

#### **Comparison Between Straight Arsenical and Combined Arsenical and Mercurial Treatment**

In its early stages, particularly in the primary stage, syphilis can be cured with the arsphenamines alone. In the later stages, the combined use of arsphenamine and mercury is the general practice. Recently, however, many physicians have been employing the combined treatment even in early syphilis.

What are the advantages and disadvantages of a straight arsenical régime? Schamberg<sup>1</sup> says: "I have no doubt that a combined arsenical and mercurial treatment is more therapeutically active and more rapidly curative than the sole use of one or the other drug; but I am equally convinced that, unless



certain safeguards are observed, an increased risk attaches to such treatment. In 15,000 intravenous injections of the organic arsenicals, we have observed only 3 to 4 mild cases of dermatitis and about a half dozen of jaundice, all of which ended in recovery. In certain clinics, where arsphenamine and insoluble mercury injections are conjointly given, the incidence of these complications has been much larger. The vigorous associated use of mercury may readily irritate the kidneys and lessen the rapidity of elimination of arsenic. The drug remains for a longer time in the liver, during which period oxidation or a splitting off of the arsenical groups may occur and arsenical poisoning result."

To prevent the damage accruing from a simultaneous use of arsenic and mercury, it has been recommended by some syphilologists that a series of arsphenamine treatments be followed by a series of mercury treatments. Here again, Schamberg says: "The safest efficient method of employing mercury with arsphenamine is by inunction and even here the rubbing should not be too intensive."

#### Dosage and Frequency of Administration

Various methods were proposed concerning the dosage, the number of injections, etc. They range from the intensive, or so-called abortive, method to the very mild method which consists of the administration of small doses at long intervals. In the early stages of the disease, when the extermination of the spirochetes as completely and quickly as possible is the aim, intensive treatment should be employed. In the late stages, the milder form of procedure must be preferred. Likewise, the health, age and sex of the patient should be dominant factors in determining the plan of treatment.

The abortive method, as formerly advocated by Pollitzer,<sup>7</sup> consists of a daily dose of 0.4 Gm. to 0.6 Gm. arsphenamine for three successive days. This arsenical treatment is then followed by weekly intramuscular injections of salicylate of mercury for a period of eight weeks. About three such courses, at intervals of two months, are given in primary lues and four or more in secondary lues.

Fordyce<sup>8</sup> recommends a course of five to six injections at intervals of one week to ten days, with average doses of 0.3 to 0.5 Gm. of arsphenamine, together with twenty to thirty injections of a soluble mercurial salt given daily or every other day, or twelve injections of an insoluble salt at weekly intervals.

Schamberg<sup>9</sup> gives a dose of 0.9 Gm. neoarsphenamine twice a week for two weeks and

then once a week for eight or ten weeks or longer. (See p. 17.)

Hazen<sup>5</sup> makes eight injections in doses of 0.4 Gm. of arsphenamine (or 0.6 Gm. neoarsphenamine)—the first four at three to five days' intervals; the last four at weekly intervals. This treatment is accompanied by a course of mercurials.

Stokes<sup>6</sup> gives three almost maximum doses during the first nine days. These are followed by weekly injections of milder doses until the number totals six to nine injections. Simultaneously with the arsenicals, he administers mercury (injections of a soluble mercury salt, and inunctions).

Many French syphilologists recommend the weekly administration of progressively increasing doses of one of the arsenicals, beginning with a minimum dose. They advocate such a procedure in order to avoid complications arising out of a hypersusceptibility to the drug. Lacapère<sup>3</sup> offers the following plan:

1st injection—0.15 neoarsphenamine, to be followed by 2 days rest.

2nd injection—0.30 neoarsphenamine, to be followed by 3 days rest.

3rd injection—0.45 neoarsphenamine, to be followed by 5 days rest.

4th injection—0.60 neoarsphenamine, to be followed by 6 days rest.

The rest of the injections (up to 0.90 Gm. or even 1.20 Gm.) are to be administered at intervals of six to seven days, the rule being that large doses should be followed by long intervals.

The administration of mild doses or a too slow increase of the dosage has this disadvantage: the spirochetes may grow tolerant to the drug (arsenic-fast), and then it may become almost impossible to obtain a cure with the same kind of medicament; at any rate, the cure may be prolonged unnecessarily, giving the invading spirochetes a chance to penetrate into various parts of the body. Indeed, there is no reason for using small doses in cases where the patient can tolerate the arsphenamines well in large doses.

The average method of treatment adopted by the majority of physicians is as follows: Eight to twelve injections are considered a course. After this, the patient is given a rest of from two to four weeks before further treatment is instituted. The effectiveness of such a course depends on the amount of drug introduced with these injections. Some syphilologists, particularly the German and French, consider 4 to 6 Gm. of neoarsphen-

amine sufficient. Others advocate a larger amount. Stokes and Cathcart<sup>10</sup> often give 8 to 10 Gm. in one eight-weeks' course of intensive treatment.

A routine examination of the spinal fluid is now advocated in every case (if possible), since infection of the nervous system may take place even in the early stages of the disease. The blood Wassermann test may be negative even though the spirochetes have succeeded in penetrating into the nervous system.

Treatment should be continued until the patient is not only free from clinical manifestations, but also until his blood and spinal fluid have become normal; and even then one or more supplementary courses are recommended in order to insure a more or less lasting cure. It is far better for the patient to receive superfluous treatment than to receive inadequate treatment. If the treatment is not vigorous enough or continued long enough to destroy all the spirochetes, late complications may arise. Neurorecurrences, particularly, are the result of insufficient treatment.

### POST-ARSENICAL COMPLICATIONS

#### Prevention of Complications

Like all other powerful drugs, the arsphenamines may exert noxious as well as beneficial effects. Which it will be, depends chiefly on the patient: his general health and the condition of those organs coming directly in contact with the drug—the cardiovascular system, the liver, and the kidneys. When these organs are damaged, arsphenamine may cause severe reactions. The drug may also be imperfectly tolerated by patients suffering from cachexia, severe anemia, endocrinous disturbances (Basedow's disease, etc.), tuberculosis of the lungs, hemorrhages, epilepsy, as well as by alcoholics and by pregnant women.

When a patient is suspected of imperfect toleration of the arsenical, the physician should proceed cautiously. To begin with: the doses should be diminished in accordance with the condition of the patient; secondly, the injections should be made slowly. Indeed, these rules of small dosage and slow injection hold good in the beginning treatment of apparently healthy persons. It is only after it has been ascertained that the patient manifests no particular susceptibility to the drug, that the standard doses may be given. Smaller doses should also be the rule in treating women and those above 50 years of age.

If, during treatment, a patient becomes sub-

ject to a slight indisposition, such as a cold, angina or gastric disturbances, the dosage should be diminished and the injections made cautiously and slowly. In cases of severer indisposition, the treatment should be interrupted altogether until the return to normal health.

The patient should be instructed to tell of any disorder experienced after an injection—such as headache, sickly feeling, dizziness, vomiting, hemorrhage, skin eruptions, gastric trouble, etc. In case of the appearance of any of these symptoms, further injections should be delayed until the symptoms disappear. The rest of the injections should be conducted with caution, since such symptoms may be the early manifestations of a possibly severe reaction.

#### Immediate Reactions

During intravenous injection, some patients feel a peculiar taste—described as metallic—which is often accompanied by a smell of garlic. Such symptoms have no importance.

*Fever and headache.* A first injection of the arsphenamines is usually followed by fever which in turn is often accompanied by headache. If the fever lasts more than a day, one may prescribe amidopyrine, acetylsalicylic acid and quinine, etc.

*Vomiting, gastro-intestinal troubles, diarrhea*—may often occur either immediately after or on the day following an injection, usually following the first injection. Tinct. opii is a sufficiently good remedy for these disorders.

*Nitritoid Crisis*—This general congestive crisis, occurring in some patients during the injection or immediately thereafter, may assume serious forms.

The usual symptoms are: flushing of the face, swelling of the lips, tongue and eyelids, dilation of the pupils, nausea, vomiting, precordial distress, acceleration of the pulse to 120 and 130 and its fall to a point of imperceptibility, indeed, often disappearing altogether for as many as 20 to 30 seconds. After these painful moments, the pulse begins to return and the patient gradually begins to feel better. In about 20 minutes, the crisis is over; the patient returns to normal and may go home.

Predisposed to the nitritoid crisis are patients with abnormal arterial tension (hypotension or hypertension) and with suprarenal insufficiency. Physical fatigue may also predispose the patient to the crisis, and, once this reaction has occurred, it may appear again and again after every injection, unless preventive measures are taken.

The best preventive remedy is adrenalin, to be injected intramuscularly, 10 minutes before the injection of the arsenical, in doses of 1 Cc. of a solution of 1:1,000. Other preventive means are the injection of but small doses of the arsenical and the suggestion submitted by Milian<sup>11</sup> that such patients be subjected to an alkaline diet—excluding all acids and giving them sodium bicarbonate or alkaline mineral waters.

Adrenalin should also be used as a remedy in cases where the nitritoid crisis has already occurred. Injection of the arsenical should be immediately stopped and 1½ Cc. of 1:1,000-solution adrenalin injected intramuscularly. This done, Milian recommends refilling the syringe with 3 or 4 Cc. of serum, which would dilute the adrenalin remaining on its walls, and injecting that into the vein. This last injection has the immediate power of revivification. Should a recurrence of the crisis be suspected, the injection of adrenalin may be repeated.

#### Cutaneous Reactions

Skin eruptions, as a reaction of arsphenamine, may occur in different forms: urticarial, macular, papular, scarlatiniform, exfoliative, etc., and are often accompanied by edema. In mild cases, the eruption may be limited to a part of the body; in severe cases, it spreads over the entire body and may develop into exfoliative dermatitis.

The prognosis is usually favorable if the reaction is noticed early. The administration of arsphenamine must be stopped; the patient put on a lactic diet; and the intestinal elimination hastened by purgatives. For all forms of cutaneous reactions, intramine (McDonagh) (Ffrench)<sup>12</sup> has proved to be a good remedy—2.5 Cc. of a 1-percent emulsion injected intramuscularly into the buttocks every 3rd or 5th day until the eruption disappears. Of late, sodium thiosulphate (Ravaut, McBride & Denie<sup>13</sup>) has been used with favorable results. In cases of exfoliative dermatitis, it has been recommended that intravenous injections in doses of 0.3 Gm. the first day, 0.45 Gm. the following, 0.6 Gm. the 3rd day, 0.9 Gm. the 4th day, 1.2 Gm. the 6th and 1.8 Gm. the 8th day, be used. The treatment is continued until the eruption has cleared.

Only after complete recovery has been brought about, should arsenical treatment be resumed, and even then cautiously and commencing with small doses.

Some patients display periodical cutaneous reactions, called "Fixed Exanthems," which appear on the same spot (usually the face) after every injection and disappear a few hours

later. In such cases, a preventive remedy is adrenalin, to be injected intramuscularly.

#### Jaundice

Jaundice, occurring during arsphenamine treatment of syphilis, may be due to the toxic effect of the drug, but it may also be of pure syphilitic origin. Here again, the remedy suggested is intramine—injected intramuscularly into the buttocks in doses of 3 Cc. of the 1-percent emulsion at 3 to 5 days' intervals. This treatment is to be accompanied by a milk diet, rest in bed and free catharsis. Upon recovery, some physicians change the drug first used to another arsenical (arsphenamine or one of its derivatives). There are cases where jaundice appears after a short course of treatment. Such manifestations are regarded, by some syphilologists, as recurrences of syphilis and are, therefore, treated with arsphenamine. (Milian)<sup>14</sup>.

#### Purpura Hemorrhagica

Hemorrhagic phenomena are comparatively rare reactions. Arsenical treatment should be stopped immediately. As a remedy for such a by-effect, Jarecki<sup>15</sup> used calcium chloratum in doses of 0.8 Gm. p. d.; Lespine and Wydooghe<sup>16</sup> recommend intramuscular injections of peptone, de Witte—0.5 Gm. in 10 Cc. of physiological serum, or hemoplastine of Parke, Davis & Co. Neither arsenicals nor mercurials should be used again; instead, bismuth may be employed. (Emile-Weile)<sup>17</sup>.

Persons with a tendency to hemorrhages or with hepatic insufficiency may be subject to this reaction. Prolonged and irregular bleeding time and prolonged coagulation time in vitro may be considered as symptoms of a possible hemorrhagic reaction. (Emile-Weile, Rabut.)

*Hemorrhagic encephalitis* is the most dangerous of reactions, but it occurs very seldom. Against possible fatalities, stringent and earliest precautions are imperative. The remedy to be used, according to some authorities, is adrenalin.

#### Herxheimer Reaction

This reaction consists of an efflorescence of the local syphilitic symptoms on the day following the first injections of arsphenamine and their decline or entire disappearance a few days later. The reaction is a result of the injection of large doses of the arsenical and usually occurs in the secondary stages of the disease. For the most part the Herxheimer reaction is quite harmless. On rare occasions, however, a strong Herxheimer reaction was observed to affect such organs as the heart, brain, liver, etc., and prove fatal.

# TREATMENT OF SYPHILIS IN DIFFERENT STAGES

## Prophylactic Treatment

Ordinarily, the principle not to treat syphilis until a definite diagnosis is made is sound. Otherwise, both patient and physician may forever remain in doubt as to a syphilitic infection having originally taken place. But, when an individual is known to have had intercourse with a person infected with syphilis, the prophylactic, antisymphilitic treatment may be considered as a necessity. Some physicians, as Schönfeld<sup>1</sup>, Pöhlman<sup>2</sup> and others, refuse to extend prophylactic treatment in cases where infection is only a suspicion, so as not to expose the patient to the possible damaging effects accruing from arsenical treatment. They prefer to wait until the appearance of clinical manifestations makes the existence of syphilis a certainty. Schönfeld states that prophylactic treatment may be applied "only when the risk of infection is equal to 100 percent, the danger of treatment equal to zero and conditions for treatment in the future worse." As to 100-percent infection, every physician knows that even repeated conjugal relations with syphilitic persons do not always cause infection. (Such cases have been reported by Schönfeld and Pöhlman.)

This view is not altogether acceptable. The chances of infection after intercourse with a syphilitic person are a thousand times greater than the probabilities of post-arsenical reaction. Again, in such cases, early precaution will cure the disease much more easily and much more surely. So that the practice of waiting is not justifiable.

The wisdom of extending prophylactic treatment has been proved in the past few years in a number of cases. Lacapère<sup>3</sup> reports a case of three men, all of whom had had relations with a syphilitic woman. Two consented to immediate arsphenamine injections and remained free from the disease; the third refused preventive treatment and developed a primary lesion. He also reports a case of a woman who had had intercourse with a syphilitic (with primary lesion) a number of times. She received three arsphenamine injections and the infection never developed.

Fournier and Guénot<sup>4</sup> conducted investigations on a larger basis. They observed forty women, all of whom had had relations with individuals having syphilitic genital lesions full of spirochetes. Some of the women had relations with these men more than once. After a brief interval (a few days to three weeks) following the suspected contamination, the

patients received four to six injections, totaling 1 to 1.20 Gm. of arsphenamine or 1.20 to 2.00 Gm. of neoarsphenamine, and all remained free from the disease—twenty of them having been observed for two and three years.\* Five others, however, who refused preventive treatment, became infected. Michel and Goodman<sup>5</sup> had about thirty patients who underwent prophylactic treatment with the arsphenamines. To quote them:

"The prophylactic doses have averaged 0.3 Gm. arsphenamine and the number and intervals of injection have varied with the time since first exposure. In no case has this been less than three doses. We have not been consistent as to the interval of injection—varying from an injection every other day to once in five days, depending on the general physical condition of the patient. The women have been awarded the longer interval in the great majority of cases. The patients treated in this manner have been under observation long enough to state that primary incubation time passes without the appearance of a primary lesion. No patient treated in this manner has developed a positive Wassermann reaction, although it has not been possible to repeat the tests in every patient."\*\*

Bodin<sup>6</sup>, at the French Congress of Syphilologists, 1922, reported that he had treated five women on the eighth to the fifteenth day following intercourse with persons having chancre or syphiloma on the genitals. They were treated each with 4 to 6 injections of neoarsphenamine (altogether 1.50 to 2.80 Gm.), and all of them remained free from the disease.

J. C. Sutton<sup>7</sup>, on cases of syphilis acquired in handling syphilitic patients, writes as follows:

"I have used intravenous injections of neoarsphenamine (0.2 to 0.4 Gm.) twice with success, when the contaminated needle was accidentally jabbed into the operator's forearm; once with the injection intramuscularly of a small amount of syphilitic blood; once when an assistant's eye and cheek were splashed with blood; and several times when the hands were exposed in the collection of serum from a chancre and during operations on patients who had syphilis."

As all the above-mentioned authorities indicate, the arsenicals afford an absolutely reliable preventive remedy when an infection of syphilis is suspected. But the arsphenamines are effective only when applied in adequate quantity. An insufficient administration may aggravate existing conditions and make the patient resistant to further arsenical treatment.

\* At present, the injections made by these authors number six to eight, totaling 2 to 2.50 Gm. of neoarsphenamine.

\*\* One other case of successful prophylactic treatment, cited in American medical literature, is that reported by Rotenberg. (*J. A. M. A.*, 82:207.)



One such case has been reported by Gonin.<sup>22</sup>

Under these circumstances, what is the treatment considered sufficient? That depends on the time that has elapsed between the infection and the instituting of treatment. Schamberg<sup>3</sup> says: "In an individual seen within 24 to 72 hours after exposure to a known active syphilitic, two intravenous injections of neoarsphenamine in 0.6 to 0.9 Gm. doses should suffice to abort infection." In cases where a longer interval has elapsed, it is prudent to administer a whole series of injections or even two series. (Lacapère.) Schamberg, on the other hand, is of the opinion that, "if a considerable time has elapsed, then it is perhaps wiser to await the finding of spirochetes in the initial sore before instituting treatment."

#### Primary Syphilis

At this stage of the disease, suspicious lesions should be carefully examined for spirochetes—the dark-field microscope being employed. Should the *treponema pallidum* be found, treatment may be instituted immediately. To await a positive blood Wassermann test when a lesion is seen early and spirochetes are found, is unjustifiable. By such delay the spirochetes multiply and become diffused throughout the lymph- and blood-paths, rendering cure less rapid and less sure. A positive blood Wassermann reaction ordinarily does not appear until the second or third week after the appearance of the chancre. By that time, the infection will have spread through the system. The ideal time, then, to treat syphilis is in the primary stage while the blood Wassermann reaction is still negative. Earlier Wassermann diagnoses, however, have been made from the chancre exudates.

It is at this stage that the incomparable superiority of the arsphenamines of highest efficiency over other antisymphilitic remedies, becomes manifest. This superiority lies chiefly in the more prompt and certain control of the infectivity of the initial lesion. Such high effectiveness is of paramount importance from the point of view of morbidity and economics.

In seronegative primary syphilis, arsphenamine is a sure remedy. Schamberg<sup>3</sup> says: "It is possible to cure virtually all cases of primary seronegative syphilis by the use of the arsphenamines alone." The arsphenamines sterilize the patient, and their continued administration in sufficient dosage will prevent the Wassermann test from ever becoming positive. This power of the arsphenamines shows how absolutely imperative it is not to lose time by instituting treatment late or by using mercurials at first.

Although one intensive course of arsphenamine treatment may be sufficient to sterilize the patient, it is wise to repeat it in order to make the cure more certain. In cases where combined treatment is employed, the combined course may be repeated. As to the theory advocating one course of intensive (abortive) treatment in the primary stage, Schamberg<sup>3</sup> says: "While there doubtless have been many thousands of successful results, yet, the occurrence from time to time of failures has led to a change of sentiment with respect to the security of a single course of treatment. Even in seronegative primary lues, recurrences have taken place after thirty injections of soluble mercury or ten of insoluble mercury, combined with eight intravenous arsenical administrations. It is now suspected that generalization of infection may take place even though the Wassermann does not yield a positive reaction. Second and, at times, third courses are, therefore, advised in primary seronegative lues." This is also the opinion of the German syphilologist, Jadassohn,<sup>23</sup> and of many others.

The combined treatment recommended by Schamberg in primary syphilis is as follows: To an individual of average good health and normal weight, 0.9 Gm. neoarsphenamine may be given twice a week for two or three weeks, followed by weekly injections until ten administrations in all have been given (i.e. provided the drug is well tolerated). After this, a course of fifteen mercurial injections or forty inunctions should be given. At the end of this period, if the Wassermann is negative, the remainder of the treatment may be mercurial. Mercurial pills may be given over a period of some months to insure a cure.

Some syphilologists, such as Queyrat and others, recommend the continuation of mercurial treatment for one year, to insure the patient against a recurrence of the disease. Others suggest that in all cases treatment be continued for two successive years whether there is any evidence of remaining syphilitic infection or not.

The Wassermann blood reaction must be observed regularly. It happens, though seldom, that a negative Wassermann reaction, before treatment, becomes positive after the first few injections. This may be due to the fact that the spirochetes had already succeeded in penetrating into the blood circulation, though they had not yet had time to cause the usual reaction when the first injection was made. (Lacapère<sup>9</sup>).



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[To be continued.]

## The Body's Immunizing Mechanism \*

By J. T. SCOTT, M. D., St. John, Kan.

THE idea that nature has a way of antagonizing disease, the so-called *vis medicatrix naturæ*, is as old as medical history.

Twenty-three hundred years ago, Hippocrates taught: "It is to the efforts of nature that the attentive and able physician looks for guidance." Galen likewise wrote: "Nature having originally formed the body must, when disease assails it, restore health."

Today, the most virile trend of modern thought is based on a corresponding principle, that is conveyed by the term immunity. Whether we seek to identify the nature of antibodies, the process through which they are caused to appear in the blood, or the manner in which they and the phagocytes oppose infection, we are but following the path opened by the father of medicine, 400 years before the Christian era.

The discoveries and developments in our knowledge of immunity are not the results of chance but the direct outcome of work along definite lines, most of it planned to demonstrate the soundness of certain theories devised to explain the occurrence of phenomena already known. The explanation of these phenomena is based then on theory, and it will be interesting as well as instructive to recall the more important ones.

The first is that of Pasteur which is based upon his observation that the chicken cholera bacillus could not be grown in the filtrate from a well-developed bouillon culture of the same organism. He says: "The muscle which has been the seat of severe disease has become, even after recovery and healing, in some manner unable to support this microbe, as if the latter, by a previous growth, had exhausted

in the muscle some principle which is not restored and the absence of which inhibits the development of the organism." He believed that the mechanism of acquired immunity depended upon the exhaustion of certain elements necessary for the development of the bacterium in question.

Chauveau believed there was considerable experimental evidence to support Pasteur's hypothesis, but observations of his own showed it to be untenable. He found that he could with impunity inoculate Algerian sheep with virulent anthrax bacilli in amounts certainly fatal for ordinary sheep, but, if the dose given was very large, a fatal attack of anthrax developed. From this, he reasoned that immunity depended not on an exhaustion of something essential to the growth of the bacteria, but upon something added to the body fluids.

Hutchins says: "The most striking point about these hypotheses is, that they both consider the body entirely passive in its resistance to infectious disease, one theory supposing that the bacteria take some property away from the body, the other that they add some property to it.

To Metchnikoff, we owe the phagocytic theory. By phagocytosis is meant a property of the leucocytes whereby they take up into their substance foreign particles, such as bacteria, pigment, carbon granules, etc., thus removing them from the circulation. This power belongs preeminently to the polymorphonuclear neutrophils, though phagocytosis by lymphocytes is occasionally observed. Metchnikoff regarded these phenomena as the principal if not the sole means at the disposal of the body to rid itself of disease-producing germs. According to his teaching, phagocytosis included the taking up, the killing and

\* Read before the Ford County (Kansas) Medical Society, at Dodge City, Kansas.

digesting of living bacteria as well as the absorption of dead bacteria and inert materials.

Later observers have pointed out that the absorption of live bacteria by the leucocytes does not necessarily lead to their destruction. On the other hand, it has been shown that dead bacteria are taken up and digested by the leucocytes and that insoluble foreign particles, such as carbon, pigment, etc., are absorbed and deposited in parts of the body where they will do no harm. Thomas and Ivy, in their work on "Applied Immunology" express the opinion that this power of the leucocytes, known as phagocytosis, applies to the taking up of all foreign particles irrespective of whether they are living or dead bacteria, pigment, etc., thus removing them from the circulation; but in itself has little or nothing to do with destruction of the life of bacteria. Phagocytic action is to be distinguished from the bacterial action of the leucocytes, which depends upon separated soluble substances and does not take place within the leucocytes themselves. They conclude by saying: "Phagocytosis, therefore, is more or less a passive endeavor to remove foreign particles from the circulation, independently of whether they are living or dead, and in this way to be regarded as one of the defensive forces of the organism against disease. The killing and destruction of living bacteria and neutralization of their toxins are carried out by means of bacteriolysins, opsonins, agglutinins and antitoxins, in the soft tissues of the body, processes that are quite distinct from phagocytosis.

The prevailing present-day view of the mechanism of the defensive processes of the body against disease is based upon the so-called side-chain theory of Ehrlich. This theory, says Thomas and Ivy, explains the interaction of various antigens and antibodies and is almost completely supported by experimental evidence. Ehrlich's theory conceives of each body cell as consisting of a central molecular complex, or nucleus, upon which its life depends and a number of processes or side-chains capable of combining with foodstuffs for the nutrition of the cell and with foreign substances which might prove injurious to it. These side-chains, or processes, are termed receptors. Each receptor has a special affinity for a certain kind of foodstuff or toxin. Certain receptors are common to all cells, while others are found only in special cells. It is also conceivable that some receptors may not be normally present but are formed only by

the stimulation of certain forms of toxins. The toxic molecule which unites with the cell receptor consists of two groups, a haptophore group which binds it to the cell receptor and a toxophore group which actually bears its toxic properties. When the receptor combines with the toxin molecule, the cell throws it off into the circulation and similar receptors are formed to take its place. These, however, are formed in excess and the cell throws them off also. These free receptors then unite with corresponding toxin molecules in the circulation. There is a receptor for each particular form of toxin molecule. Thus, the diphtheria toxin combines only with the specific receptor provided for it and will not unite with those intended for tetanus toxin. Ehrlich's theory, which at first only covered the simple union of toxin with antitoxin, was extended also to explain the action of more complex antibodies and may be said to cover completely all forms of antigen-antibody action.

It will be readily noted that every attempt at an explanation of the immunizing process is based wholly on theory, the outstanding ones being Pasteur's exhaustion theory, Metchnikoff's phagocytic theory and Ehrlich's side-chain theory, which have already been considered somewhat in detail, particularly Ehrlich's side-chain theory which is at this time the one most generally accepted.

The result of the painstaking labors of these and a host of other investigators is convincing proof that our organism is supplied with autoprotective substances, but so far the identity of these substances has not been revealed. Even Ehrlich's theory has failed in this particular. Sajous calls attention to the fact that his side-chain theory, notwithstanding the many collateral facts that the labors devoted to it have brought out, has remained but a clever figment of the imagination in so far as the side-chain feature itself is concerned—a pure assumption the truth of which is yet to be demonstrated, notwithstanding the many years it has been carefully studied. Nor, he continues, have the sources of the various substances which take part in the immunizing process so far been identified. Ehrlich hypothetically attributes this role to the tissue cell, but, even granting that this be so, we are only driven back (unless we remain with him in the field of conjecture) to the necessity of showing whence these cells obtain their immunizing bodies, his so-called receptors. This he has failed to do, along with all other investigators in the same direction, because he and they have overlooked the one field which

experimentally and clinically offers the only solid foundation for a profitable analysis of the question, that of the ductless glands.

After much careful clinical and experimental study of the functions of the ductless glands, together with the evidence of many other prominent investigators, Sajous, in 1903, advanced the view that the body was supplied with an immunizing mechanism and showed that the adrenals and the thyroid were the sources of two substances regarded by pathologists as prominent agents in the immunizing process, but the source of which they had not identified; and that the secretory functions of these organs were governed by a center located in the pituitary body. He suggested, moreover, that it was probably by exciting this center that various familiar drugs and toxins produced their beneficial effects.

Thus was taken the most advanced step in our knowledge of the process of immunity, and the years that have elapsed have only served to strengthen it. Heretofore, the literature on immunity has been, to say the least, confusing. Each theorist coined his own names for substances in the blood and tissues necessary to the explanation of his theory, which resulted in a multiplicity of names for the same substance. We read of opsonins, agglutinins, precipitins, lysins, amboceptor, complement, antibody, stimulin, sensibilizer, etc., etc., until the student usually experiences what may be well termed a confusion of confusions. In a paper on the interrelations of the glands of internal secretion, I stated that authoritative opinions differ regarding it, nor is it likely that there will be anything approaching a consensus of views in this direction until there is emergence from the chaotic condition of knowledge concerning the classification and elementary functions of these glands. This statement is equally applicable in the study of the subject of immunity. As has already been stated, up to the time of the promulgation of Sajous's theory, there was no attempt to identify the immunizing bodies, much less to indicate their source. This he does, thereby rendering the subject intelligible and comparatively simple.

In a matter so important, a somewhat detailed description of the organs composing the immunizing mechanism together with their functions as such is called for and is best stated by the promulgator of the theory who says: "To facilitate the discussion of the subject, I will merely recall that, interpreted from my viewpoint, the functions of these

organs, both physiological and defensive, are as follows:

#### The Adrenals

"These organs supply a secretion which, on reaching the lungs, absorbs the oxygen of the air and becomes a constituent of hemoglobin—its albuminous constituent. It is, as such, taken up by the red corpuscles and secreted by these cells as droplets (the so-called blood platelets) in all parts of the body, including the blood plasma itself. The purpose of the albuminous hemoglobin, which I have termed adrenoxidase, is to supply oxygen to the tissues and to the blood. Important in this connection, however, is that this adrenoxidase gives the reactions and presents other characteristics of a familiar agent in the classic immunizing process, the immune body, or amboceptor. The active participation of the adrenal secretion in the defensive function suggests itself when the connection between oxidation and fever is recalled. Adrenoxidase being the active agent in all oxidation processes and being capable of raising the temperature we have a clue to the identity of one of the most important of the symptoms we meet on all sides, and the actual nature of which has not, so far, been explained, namely, fever.

#### The Thyroparathyroids

"The thyroid gland and parathyroid glandules which constitute this apparatus produce secretions which, on passing out of the lymphatics (into which they are secreted), enter the left subclavian vein and become merged into a single substance. Passing then into the blood of the superior vena cava, this secretion is carried to the lungs and, on reaching the air cells, is taken up by the red corpuscles, along with the oxygenized adrenal secretion. A salient feature of the immunizing process appears in this connection, viz., the thyroparathyroid product is also secreted by the red corpuscles into the blood and tissues, and, by acting directly upon the phosphorus (which the nuclei of all tissue cells, pathogenic organisms, etc., contain), increase their inflammability, i. e., their sensitiveness to oxidation. As such it acts both as opsonin and agglutinin.

"In a recent work, Swale Vincent states that it may be supposed that the function of the internal secretion is to prevent poisoning by the products of body metabolism or by infections from without. My opinion, that the thyroparathyroid product is what Wright has termed 'opsonin', has been sustained by the investigations of Marbe, Malvez, Stepanoff and others.

### The Pituitary

"Considered in connection with immunity only, the pituitary body contains, from my viewpoint, a center—the immunizing center—located in the pars intermedia, between the two lobes, and connected with the adrenals and the thyroparathyroid apparatus by nerves. Through these nerves, the immunizing center governs the functional activity of these two sets of organs and, therefore, the production of adrenoxidase (amboceptor) and of thyroiodase (opsonin and agglutinin), besides general oxidation. As such, the immunizing center is also the heat, or fever, center, the febrile state indicating that one or more poisons are present in the blood which this dual center is antagonizing through its militant agents the thyroparathyroid apparatus and the adrenals and also indirectly through the phagocytes. It will be recalled that Metchnikoff attributed to certain white blood corpuscles the exclusive role in the body's defensive functions due to his discovery that they had the power to ingest and absorb germs and foreign substances. This power was not manifest in all white corpuscles but was notably present in the polymorphonuclear neutrophils. To these cells he gave the name phagocytes; hence the designation of his theory as the phagocytic theory."

Time will not permit a detailed discussion of the leucocytes in their relation to organic functions and immunity. Yet, as is well known, the autoprotective resources of the body do not depend only upon the germicidal and antitoxic constituents of the blood plasma. Indeed, they could not be carried out without the potent cooperation of the phagocytes, the importance of which in immunity has been revealed to us through the genius of Metchnikoff.

In conclusion, I shall present Sajous' simplified theory of immunity which is as follows: "There occurs, at first, what might be termed the preparatory stage, the purpose of which is to increase the defensive constituents of the blood and other body fluids. The toxic (certain toxins, wastes, drugs, vaccines, etc.) excites the immunizing center. This center, in turn, stimulates the thyroparathyroid glands and the adrenals, thus causing them to supply the blood with an excess of thyroiodase and adrenoxidase. Metabolism being enhanced in all tissues by these substances, the pancreas also secretes an excess of tryptic ferment, while the leucocytogenic tissues (bone marrow, lymph glands, etc.) produce an increased number of leucocytes, mainly finely granular

oxyphiles and phagocytes. The blood and other body fluids being now provided with all its defensive agents, the following procedure is started:

"The thyroiodase (opsonin, agglutinin) sensitizes and softens the pathogenic agents, while the adrenoxidase (amboceptor) oxidizes the phosphorus of the nucleo-proteid granulations, liberating heat; the activity of the tryptic ferments (plasmatic and phagocytic complement) being correspondingly increased, the pathogenic agent is converted into benign and eliminable products."

I ask your indulgence in presenting a condensed recapitulation. I would emphasize the fact that this is the first time a theory has been promulgated that offers a suggestion as to the nature or origin of the many so-called immunizing substances. The first attempt at a rational classification of the glands of internal secretion and the first suggestion as to the chemical nature and method of physiological action of these substances. Nor is the theory a figment of the imagination, being based upon the accumulated clinical knowledge of the entire past history of medicine, as well as the knowledge born of modern physiological and laboratory research. By it, the study of the glands of internal secretion is simplified and normal physiological processes are made clear which had remained unexplained to the present time. It will be the means of revolutionizing pharmacodynamics in providing a rational explanation of the physiological action of drugs. It will provide chart and compass for the good ship, Medicine, as she plows the sea of empiricism. Is it not then worth while? It is but the dawning of a new day whose light will dispel the clouds of ignorance. Therapeutic nihilism will be replaced by therapeutic science and internal medicine will proudly take the place she has so patiently sought through all past ages, along side the other exact sciences, in the same sense that they are known as exact.

A short time before his untimely death, Dr. John B. Murphy, the celebrated Chicago surgeon, made the statement at a medical gathering, "If I had my life to live again I would unhesitatingly select the field of internal medicine." No doubt, he visualized a not far distant day when the internist, armed with methods of scientific precision, would recognize and successfully combat beginning pathological processes, thereby doing away with the necessity for later surgical interference. The

field then left to the surgeon would be his natural field, that (in the main) of accidents.

Such a bold and desirable conception is to me not unreasonable.

## Fistula of the Rectum

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THE term "fistula" is a Latin word, "fistula" meaning a reed or a pipe. Its application in pathology refers almost exclusively to sinuses found in the rectal region. The existence of a fistula presupposes some antecedent infection and necrosis which, in the great majority of instances, is a simple pyogenic infection. Only comparatively few fistulae originate from without the bowel. Through the lymphatics, the infection extends to the nonresistant perirectal fat and, presently, a perirectal abscess develops and opens either externally or internally or in both directions.

Sometimes, even though the abscess has been opened by a suitable incision, and usually if the abscess has been allowed to rupture, the healing proceeds up to a certain point but remains incomplete; a sinus remains, surrounded by dense scar tissue and lined by granulations and (sometimes) partly by epithelium.

The openings, either external or internal, may be almost microscopical. It is the internal opening which usually determines the chronicity of the process. Many fistulae originate in an infected hemorrhoid, an anal fissure, ulcer or a superficial abrasion. It may originate in some other organ; namely, the bladder, prostate, urethra, vagina, uterus, a suppurating broad ligament, an ovary, or a necrosed bone. In a few instances, there is no demonstrable portal of entry. Infection beginning elsewhere in the pelvis may later burrow into the rectum or the whole trouble may be found to be extrarectal. Therefore, merely because your patient has a fistulous opening upon the buttock, do not presume that it must be rectal, but find out what it is, and then you will more than double the number of your cures.

There are some malignant, tuberculous or syphilitic fistulae that are incurable. It is possible that fistula may result from a penetrating wound from without which became infected. Such a termination, however, is rare. Most fistulae result from improper treatment of an abscess. This may be at the operation or during the aftertreatment; for example,

too small an incision at the operation or too long retention of the drainage tube or packing of the wound.

A very large percentage of fistulae are due to secondary diseases preceded in their development by other rectal diseases. From the standpoint of treatment, this is the most important period.

In this list of conditions are, proctitis, cryptitis, constipation, hemorrhoids, fissure, stricture, ulceration and other rectal conditions which favor the invasion of the sinuses, the diverticula and the perirectal tissues with pyogenic organisms.

Fistulae are often branched or multiple, and the openings may be a considerable distance from the anus. The whole perineum and buttock may be indurated and hard or, if the abscess has filled and emptied several times, the parts become honeycombed with a great many fistulae communicating one with another. Some part of this great labyrinth is always abscessing. Kelsey reports between 20 and 30 sinuses in one case. In practice, about one-fourth of all the rectal cases are fistulae.

Sometimes, the infectious process extends upward around the rectum and perforates the bowel two or three inches above the anal orifice. Examination of such a fistula at a later date might mislead the surgeon to suspect a high origin of the fistula when, in reality, it is low down and perhaps concealed in a benign-appearing hemorrhoid.

Why do rectal fistulae refuse to heal spontaneously? This question has been answered variously by different authors. Probably a number of factors combine in each case and which, after all, resolve into the single word "reinfection." The percentage of cures is determined by our ability to ferret out these different avenues in the case at hand.

First, there is contact infection by such ways as: (a) forcing of fecal matter into the fistula from the bowels; (b) exogenic infection through the external opening; (c) sometimes, the small opening or the irregular shape of the fistula retains the infectious or necrotic tissues and prevents proper drainage of the sinuses; (d) the tuberculous sinus is lined



with caseous degenerating granulations and is also surrounded by a dense cicatricial tissue.

In a second class of cases, the circulation, venous or lymphatic, is at fault. The human animal spends most of his hours sitting or standing; and, in this position, there is a sluggish return-circulation.

Sometimes, even when the sinuses have been widely opened and thoroughly drained and all sloughing tissue has been removed, they still refuse to heal, although careful search fails to show any branches or diverticula. Hartman has suggested that these persist because of osmosis of infecting agents from the rectum through the thin walls. These tissues become clogged with bacteria which impede but do not strangle the tissue circulation and it becomes a harbinger of infection. In the same manner, there may be a rectal ulcer or other infection which the lymphatics try to carry off but, in so doing, the lymph glands become overloaded and break down, resulting in an abscess. This is drained, thus temporarily relieving the system, but the lymphatic connection between this node and the primary source of infection in the rectum, or wherever it may be, is still virulent and reinfects the site of the abscess which is the base of the sinus. This method of infection is, I think, an important factor, because the phagocytic action of the white corpuscles is insufficient or slow. That is, the opsonic index is low.

Although the pathogenic microorganism is usually the streptococcus, the staphylococcus or the colon bacillus, it is not always so. Sometimes, tuberculosis, syphilis or carcinoma are at the bottom of the trouble. It is well to remember that ten to fourteen percent of all patients presenting rectal fistula have active tuberculosis of the lungs; but, of course, not all phthisical patients having rectal fistula necessarily have tuberculous fistula. Hartman found that fifty percent of his cases were tuberculous. It is estimated that five percent of all tuberculous patients have rectal fistula. The nature of the infection may be determined by examining the discharge of scrapings from the lining wall of the fistula, either microscopically or by injecting it into a guinea pig.

Any exhausting disease, such as rheumatism, diabetes, cirrhosis of the liver or the acute fevers, may have associated an ulceration of the rectum. Typhoid fever and dysentery frequently have such a complication, and then a fistula may result. In the last two diseases, a true perirectal abscess may be found that has resulted from the escape, through the tissues or the lymphatics, of the bacteria that

caused the original disease.

Frequently, the abscess that caused the fistula originated from an injury or ulceration of the crypts of Morgagni and the lymphatic absorption and infection that takes place. This ulceration may persist after the abscess has opened and drained, because the sinus connects by its lymphatics with the infecting host of the crypt, and the pyogenic organisms overwhelm the leucocyte, thus protracting the discharge. It is for this reason that it is so all-important to ferret out the original site and source of infection. The mobility of the rectal wall, which is always a part of the fistula, is said to be a factor in the chronicity of this condition. Every movement of the rectum, perineum or legs, every respiratory or involuntary peristaltic movement disturbs the approximating surfaces of the sinuses, and a moving surface cannot adhere, of course.

Fistulae classified according to the location of their opening. Thus we find:

1.—Simple complete fistulae with two or more openings and a sinus connecting. These are further classified as the

- (a) ordinary complete with an opening inside and another one outside the anal canal.
- (b) internal complete, being a complete sinus with both openings within the bowel.
- (c) internal complete with both openings near the anus but not above the sphincter muscle.

2.—The incomplete fistulae are collapsed abscess-pockets opening in but one direction and are referred to as "Blind Internal," opening within the bowel; "Blind External," opening only upon the skin. "Mucocutaneous" and "Submucous" are so named from their anatomical location.

Further varieties are the

- 3.—Horseshoe fistula.
- 4.—Rectovaginal fistula.
- 5.—Rectovesical and rectourethral fistula.

The ordinary complete fistula is a sinus with an internal opening into the rectum and one or more openings on the skin. Hence its name. This is the most common type of fistula. An external complete fistula is one with both of its openings on the skin and not communicating with the rectum (Fig. 1); while an internal complete is one with both openings within the rectum and not involving the skin.

Not every fistula communicates with the rectum (although the great majority of fistulae do), especially if the abscess has existed for some time and has filled and ruptured

repeatedly. The complete fistula results most frequently from an abscess situated in the ischiorectal space, the triangular space, or the deep perineal structures.

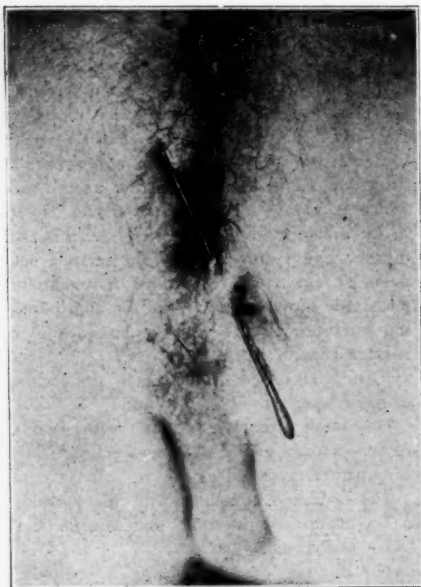


Fig. 1. An external complete fistula. Both openings are external to the anal canal.

An *incomplete fistula* represents an abscess that ruptured early without much burrowing or undermining. An incomplete or blind external fistula usually begins as a marginal abscess from an ulcer within the canal or following cryptitis, although it may begin in the perirectal or ischiorectal structures, and opens upon the skin but does not extend into the rectum. It differs usually from the complete variety in that there is a broad undermining of the mucous membrane instead of narrow channels. The internal opening is situated often at the base of an ulcer or hidden in the folds of mucous membrane. If posteriorly to the rectum, the fistula may be superficial or deep but, if anteriorly, it is usually superficial. The posterior, deep internal, in-

complete fistula usually is the result of an abscess in the triangular space of the rectum.

The *horseshoe fistula* is nearly always of long standing and takes its name from its fancied resemblance to a horseshoe. In this variety, the original openings have become blocked and the retained pus burrows in a new direction, finding a new outlet. Thus, a typical fistula has one opening within the rectum and one or more external openings on either side of the anus. Sometimes, the pus burrows around the rectum in the loose areolar tissue and forms a new opening on the opposite side of the anus from the first. In



Fig. 2. Horseshoe fistula having but one external opening.

this burrowing, the pus generally passes posteriorly to the anus, and very often the internal opening is found in the median line posteriorly. There are many deviations from this typical description. A horseshoe fistula may have only one external opening and, yet, the pus may have burrowed all around the rectum, the resulting fistula being either complete or incomplete in form. (Figure 2.)

## A Question of Mechanics

By R. L. LARSEN, A. B., M. D., Chicago

**M**AN-MADE machinery is becoming increasingly more complex, more diversified in application and more perfect in operation. The sources of energy are but few—compressed gases and electricity—and their actions are well understood. The fundamentals of mechanical energy are very much the same (though the source may vary) and simple to interpret. Only as these principles are developed and applied to difficult and unusual attainments, do machines become intricate and delicate. Modifications to increase efficiency and to distribute energy, refinements in producing energy and additions to perfect the article manufactured, add to the complexity. Still, the fundamental mechanical principles remain always the same.

The proper care of machinery is of utmost importance to producers of machine-made products. The very success of business depends on the proper functioning of the man-made machines. These machines must be ready to respond to their capacity when called on to perform. To do so, they must be frequently inspected, constantly watched and meticulously cared for. The machine is not allowed to produce until it breaks down, and then have its production stopped while repairs are made. Such accidents are prevented, as far as humanly possible, by expert inspection, while in operation, and repair or replacement of worn or broken parts are made during rest periods so that, when called upon, the machine can respond with a full performance of its share of production.

The fundamentals of this department of mechanics are also of the simplest. Difficulties increase with the intricacies of the machine, but the fundamentals remain always the same:

1. Energy—the source must be constant.
2. Lubrication—must be correct.
3. Rest—even a machine needs rest periods to insure maximum efficiency.
4. Inspection—worn and imperfect parts must be discovered and repaired or replaced.

Go to any large manufacturing plant and see how well these principles are employed. Constant source of energy is insured by having extra boilers or dynamos, ready for use in case one of the regulars fails. Various sections of the plant have their men whose sole duties are to see that oil is running freely

where there are moving parts in friction and to watch for any sign of wear or imperfection in working parts, to be repaired or replaced during a rest period. Also, note that, if the plant is running on a 24-hour schedule, the plant is never in full operation, but that certain sections are at rest and, during these rest periods, are being more rigidly inspected than it is possible to do during operation. And, if you seek the information, you will learn how surprisingly seldom any section has to be shut down during its operating period because of breakage or failure to function properly. Why?

The reason is apparent and the answer simple. *Scientific inspection anticipates* and removes the possible source of failure, while scientific control of the source of energy and care, while running, keeps the machine running perfectly while in operation. The cost of such inspection and control is considerable, but it does not compare with the cost of failure to operate when needed. The cost of maintaining extra machines, to enable each machine to have rest periods, is great, but it is more than compensated for by lengthening the life and usefulness of each machine and insuring its maximum efficiency.

While mechanical engineers and successful business men realize that expert supervision and anticipation of failure, with their attendant cost, are the most economical methods for achieving maximum efficiency from man-made machines, what can be said regarding the maintenance of maximum efficiency in the God-made machine—Man?

Man is, after all, a highly-organized machine. The actions and activities of the human body follow out mechanical and chemical laws. It is a far more intricate and delicate machine than any man-made mechanism ever produced, but the *fundamental* points in regard to proper care of this machine are the same. There is this difference. Man is endowed with a brain. He has Intellect, Will—a Mind. He is given intelligence to know how best to take care of this machinery—himself—while the man-made machine must rely on man to take care of it. The neglect to care for his own human machinery is man's responsibility. The neglect to care for man-made machinery is also man's responsibility. It is a double responsibility and, peculiarly, while man is will-

ing to provide every care necessary to prolong and increase the usefulness of his mechanical servant, he is just as prone to neglect his own marvelous personal mechanism—a mechanism beyond his ability to duplicate and one which, when worn out, is beyond his ability to repair. Is this due to ignorance of his responsibility, lack of interest in himself or ignorance of the proper methods of care?

It can be truthfully said that it is due neither to ignorance of the responsibility nor to lack of self-interest. Whether or not it is due to ignorance of proper methods, is a question worthy of further consideration.

When we approach the subject of proper care and maintenance of maximum efficiency of the human machine, we unconsciously fall back to a comparison with the man-made machine. The fundamentals can again be grouped under the same headings and the same methods be used. Only the application must be on broader lines.

1. Energy—The source must be constant. Here we deal with food and drink and the metabolic processes of the body. If the human machine were fed as scientifically as the steam or gas engine, how much more efficient it would be! What would happen to the steam engine if the boiler were filled with gasoline—or to the gas engine if the proper fuel were mixed with water? The efficiency of both would be ruined—to say the least. Is it any more logical to fill the stomach of the human machine with poisonous drinks or food containing a negligible amount of nourishment?

2. Lubrication must be correct. Here, our simile leads us to the alimentary tract and may more broadly, include the urinary apparatus and the excretory glands. The body intake and the mode of living should be so regulated as to stimulate the various agencies which eliminate waste products to maximum efficiency.

3. Rest—proper rest—mental and physical—daily and through annual vacations, is obviously of prime importance.

4. Inspection—Worn or imperfect parts must be repaired or, perhaps, removed. Here is the most neglected division of the efficiency department. It is a little-used method and one which is capable of giving infinite returns. A survey of this field reveals an astonishing degree of ignorance and opens a large field for education. How much illness and grief might be avoided, if the human machine were subjected to periodic inspections before broken down? It is not necessary to discuss the many diseases which might

be discovered in incipient stages, when amenable to treatment, and which might be controlled, arrested or cured. Why does the average man allow his delicate human mechanism to break down before he asks for inspection, rather than endeavor to *anticipate* a breakdown by periodic examination by his physician? He would not treat his man-made machine as badly! Not if he expects efficiency from it. Nor would he delegate the care of such a machine to anyone but an expert—one who knows that machine. Yet, when he does submit himself to examination, does he demand an expert? Not nearly as consistently.

Here is food for thought—and a field for education. No matter who may be responsible for the existing ignorance in this field, it exists and, unquestionably, the responsibility for education lies with the medical profession. It is for us, by patient endeavor and through every available means, to teach Man that he is a machine and that, to maintain his efficiency as well as he maintains the efficiency of his mechanical servant, he must treat himself at least as well. The questions of proper food, proper elimination and proper rest, though often not heeded, are rather well-known subjects. But, the question of periodic physical examinations of apparently well persons needs more emphasis, and these same persons must be taught the value of the procedure and the need to apply the lesson. They must be taught that *anticipation* of possible physical disability and its attendant treatment—active and prophylactic—is the economical method for care of the body mechanism. They must also learn that such examination, to be of real value, should be conducted by qualified physicians who have learned as much as it is possible to learn of the human machine—and not by cultists and faddists who confine their learning to a small part of medical knowledge and then distort these facts to suit their cults or fads.

Our dental colleagues have very properly taught us to have our teeth examined from two to four times a year, even though we may have no apparent trouble with them. The result is, better oral hygiene and, no doubt, less focal infections. In this, the dentists have paved the way and taught us, who should be teachers, a lesson. And their lesson is being very generally accepted and applied.

Now, it is for us to patiently and persistently teach our lesson. Ours is a lesson in body economy and, while it might be detrimental to the personal income, through les-

sened illness, it will be a boon to public health, and the medical profession can never be accused of taking a stand against altruistic methods. It will be a tedious and perhaps

thankless effort to begin with, no doubt, but the lesson will be learned and appreciated in time, and effort thus expended will be well expended.

## Vitamine Deficiency in the Causation of Disease

By EDWARD A. TRACY, Boston, Massachusetts

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VERY important research work on the vitamins in diet has been under way during the past few years. The writer has witnessed some of the investigation going on in this line; namely, the work of Dr. Percy R. Howe, assistant professor of Dental Research at Harvard University. Dr. Howe's work, being particularly directed towards the etiologic factors of dental disease, has found publication in the dental journals. However, what may be termed the by-product of his work, the manifestation of other than dental disease, is extremely important to general medical science. I offer no apology, indeed I deem it a duty and a privilege to direct the attention of my fellows in medicine to Dr. Howe's paper. It was published in *Dental Cosmos*, November, 1921, under the title, "Report on Studies of the Effect of Vitamine-Deficient Diet Upon the Teeth." His remarks upon the vitamins are as follows:

"The three groups of vitamins given are: the A group of vitamins (or the fat-soluble group); the B group of vitamins (or the water-soluble group); and the C group of vitamins (or the antiscorbutic group).

"The fat-soluble group or A group is supposed to play an important part in rickets. Curvature of the bones is produced by a deficiency of this group. Mrs. Mellanby has produced irregularities of the teeth by such feeding.

"The water-soluble group or B group was first noticed for its effect in beri-beri. A deficiency in this group produces profound nervous disturbances. It is the cause of beri-beri. Prompt cure follows the feeding of the vitamins. Its deficiency has not been spoken of in bone disease, but both the symptoms and the autopsies of experimental animals point to a profound calcium disturbance. The nervous symptoms indicate a disarrangement of the equilibrium, expressed in an irritability, between muscle and nerves, which as pointed out by Loeb is maintained by the calcium salts. Autopsies show atrophy of many of the glands of internal secretion whose effect upon calcium metabolism is well known.

"The existence of the third or antiscorbutic group was for a time questioned. This was due to the fact that much of the laboratory work had been done on rats or dogs. These animals are not subject to scurvy as far as is

known, but in man, the monkey and in the guinea-pig scurvy occurs, and it has been proved to be identical in all three cases. In the guinea-pig a deficiency of this group of vitamins is shown by swollen and sensitive joints. The teeth become loose, the gums bleed and in cases of long standing a good flow of pus occurs. The structure of the teeth is markedly affected.

"The fat-soluble group is contained in cream, butter, yolks of eggs, cod-liver oil and other fish oils, animal fats, except lard, but not in vegetable fats, in yellow grains and vegetables, in the leaves of vegetables, in whole wheat bread, in wheat embryo, in bananas, in walnuts, in the glandular organs of animals, as liver, kidney and sweetbreads.

"The water-soluble group is found in milk, the germs of grains, in eggs, in yeast, in liver and sweetbreads, in muscle meat, in peas, in potatoes and lentils. White flour is deficient in this group.

"The third group is the antiscorbutic group. This is found in orange juice, lemon juice, lime juice, raw swede juice, raw cabbage, in tomatoes, in green vegetables, in milk, but in rather small quantities. The antiscorbutic properties of milk vary with the diet of the animals. This vitamine is also found in fresh meats in small quantities."

On feeding guinea-pigs with a diet containing a sufficiency of proteins, carbohydrates, and organic salts, but deficient in all three groups of the vitamins, Howe noted the following effects:

"First, the teeth have become extensively decalcified. They are easily penetrated with a sharp but delicate instrument. The teeth readily bend. In some instances, distinct cavities have formed. Ground sections show that the dentine is badly disintegrated. The destructive effects are rapid and severe. This seems to us to be very similar to true dental caries.

"Second, the alveolar process is absorbed, the teeth become very loose, and protrude from their sockets and the articulation is disarranged. Inflammatory and degenerative changes occur in the peridental tissues; indeed the condition closely resembles pyorrhea. Elsewhere we have shown that the injection of microorganisms into the gums establishes no condition that simulates pyorrhea. The infection then is not the causative factor but is secondary.

"Third, irregularities of the teeth occur. In one case, the anterior part of the jaw became decalcified. By muscular action, the teeth



moved, crossing one another like the letter X. By a return to normal diet, recalcification occurred, fixing the teeth in their abnormal position. Asymmetrical jaws also have occurred.

"Fourth, carious areas are found in the jaws themselves and in severe cases the head bones are affected.

"Fifth, by keeping the animals for some time upon a vitamine-deficient diet, considerable areas of the jaws become decalcified. Upon a return to a normal diet large plaques of new bone formed. One lower jaw is almost wholly encrusted with new bone. This eventually becomes smoothly laid down.

"Sixth, it is a common theory to associate tooth difficulties with eye troubles. If eye troubles are obscure, the teeth are one of the first things that are held responsible for them. No one seems to think that both tooth trouble and eye trouble might have the same underlying cause, yet xerophthalmia is one of the signs observed as indicating the onset of trouble that follows fat-soluble deficiency. Running eyes occur with regularity in scorbutic feeding. Many of our specimens of guinea-pigs' skulls show decalcified areas of the bone in the orbit, usually at the base of the teeth.

"In young mothers, whose diets are deficient in respect to vitamins, many eye disturbances are noticed. Some have cloudy spots upon the coatings of the eye. With normal feeding these disappear. One animal was born with no eyes. We have one alive, born with but one eye. In another, opacity of the lens of both eyes has gradually occurred until the animal has become blind. On preparing this eye for sectioning, a circumscribed area dropped out of the lens. The conjunctiva was not affected. His case was diagnosed as cataract. In a mother that had just borne young a similar condition made its appearance in her eye. After feeding her large quantities of orange juice, it entirely cleared up. Cataract at times follows parathyroidectomy. In water-soluble deficiency the parathyroids often atrophy and parathyroid disturbance is associated with a general disturbance. When we consider how common dental caries is and how many youngsters have eyes that need correcting, we may, in the light of these experiments, reason that a faulty nutritional disturbance lies behind both.

"Joint infection regularly follows deficiency in the antiscorbutic vitamins. As we have stated, the joints become swollen and sensitive. Looseness of the teeth occurs at the same time. The tooth trouble does not cause the joint trouble nor the joint trouble the tooth trouble. Both are indications of the same general disturbance. Givens and Hoffman have made bacterial examination of the enlarged front joints of guinea-pigs fed upon oats alone. They report that they are sterile. They further report that this is also true in the majority of guinea-pigs fed upon the soy cake food. The blood was also found to be sterile. If the leg joint disturbance is made to persist for a considerable period and the animal is then placed on a normal diet, ankylosed joints are produced.

"Nervous conditions are very marked. The

animals run around and around in their cages and through their food, snatching a mouthful now and then. They hold their heads to one side. They sway their heads from side to side if picked up, run around in a circle, always one way, and then fall down turning over on their backs, feet uppermost. Upon handling, they show signs of tetany. These effects are attributed to a deficiency in water-soluble vitamins. When we consider that upon autopsy they show atrophy of the glands of internal secretions and that in parathyroidectomy similar symptoms occur, due to a calcium disturbance, we may reasonably feel that we have here also a marked calcium disturbance. In some of these cases in rabbits the entire skull was carious."

The very important deduction made by Howe is, that dental caries is a process that has for its base a defective nutrition of the structures involved; and that improper diet, especially lack of calcium and vitamins, is to blame. Heretofore, dental caries has been looked upon as having solely a bacterial causation. As an illustration of lack of calcium on teeth development, I recall an experience in my practice, some thirty years since. I was called to prescribe for an old lady; after doing so, her son, showing me his child, eighteen months old, jokingly remarked to me that he intended to take it to the dentist to get a set of teeth for it. The child hadn't cut a tooth! Ten drops of calcium lactophosphate administered thrice daily was followed in a few months by the eruption of a full quota of teeth.

While Howe's work has been primarily guided as an investigation of dental pathology, the diseased conditions of other tissues witnessed by him and reported in his paper have a most important bearing on general medicine, and to focus the attention of medical confrères on this portion of his work is the object of this paper. Howe remarks that "Xerophthalmia is one of the signs observed as indicating the onset of trouble that follows fat-soluble vitamine deficiency." This statement recalled vividly to mind a case of joint tuberculosis complicated with ophthalmia, treated by me some twenty odd years ago. Codliver oil (rich in fat-soluble vitamine) quickly cleared up the eye trouble and, let me add, protection of the joints affected from weight-bearing, together with immobilization for two years, was followed by complete recovery of the joint tuberculosis.

At the present time, the etiology of rheumatoid arthritis is unknown. In the light of Howe's work, it comes within the field of probability that vitamine deficiency has to be considered as a possible cause.

The manifestations of nervous disease witnessed by Howe are of special interest to the neurologist. It has been my privilege to study some of these results in his later experimental feeding of monkeys in the Forsyth Research Laboratory. I have there seen epilepsy result from vitamine deficiency. The importance of this, which inaugurates a new chapter in the etiology of this disease, will be discussed in a later paper.

My closing remarks shall touch upon a practical aspect of the subject. In treating patients, in some cases, it is desired to have assurance that they ingest a sufficiency of the vitamins, A, B and C. These patients are ordered to take 30 drops of codliver oil (A, or fat-soluble, vitamine); a half yeast cake dissolved in half glass of water (B, or water-soluble vitamine); and the juice of an orange (C, or antiscorbutic vitamine), twice a day.

## Pathogenesis and Treatment of Epilepsy

By SOLOMON R. KAGAN, M. D., Boston

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### 1.—Etiology of Epilepsy

THE etiology of epilepsy is far from clear. Tillman<sup>1</sup> affirms that there is no epilepsy without anatomical basis or without histological changes. Fisher<sup>2</sup> suggests that the usual inclination in epileptics is due to affliction of the suprarenal cortex. According to Held,<sup>3</sup> the cause is to be sought in certain epileptogenic poisons, namely external (meat, decayed food) and internal (disorders of internal secretion). On the basis of this theory, Held proposed serum therapy in the treatment of epilepsy and, according to his experiments, he observed good results from the injections of serum of immunized guinea-pigs.

Many writers have observed a certain relation between epileptiform attacks and disorders of the internal secretory glands. The endocrine influence in epilepsy was confined by experiments.

Gowers<sup>4</sup> called attention to the fact that the majority of cases of epilepsy have their beginning during the period of puberty. Hypo-, hyper-, or dysfunction of the pituitary, thyroid, parathyroid, adrenals, as well as of the sexual glands is capable of producing idiopathic epilepsy.

Some authorities suggest that, in addition to the hereditary influence and psychogenic factors, there is an abnormality in some part of the human body. Di Gaspero<sup>5</sup> claims that the blood picture shows a diminution of the leucocytes. Changes were found in the reaction of the blood, in the quantity of albumin, cholesterine, antitrypsin, in coagulability and viscosity. There were observed disorders of metabolism, of oxidation of carbohydrates, albumin and fats. Due to the deficiency of oxidation, the albumin produces acids and toxic products which directly or indirectly

cause the attacks. Cabittos observed fits in guinea-pigs caused by hypodermic injection of blood serum taken from an epileptic after the attack. Rhodes has proven the disorder of metabolism of purin which, he claims, is characteristic for epilepsy. The changes in the urine of epileptics were found as follows: an increased excretion of ammonium, of uric acid as well as creatin; after the attack, the amount of urine is increased, the acidity is also increased on account of the excretion of phosphorus and lactic acid.

Tracy<sup>6</sup> noted that, in epilepsy, the sympathetic branch is diseased showing abnormal reactions to measured stimuli, and chronic white spots in the skin (vasoconstrictor spots). Furthermore, it was demonstrated that chronic epileptics with frequent convulsions suffer from a calcium deficiency. This was determined by x-ray investigation.

Gaines,<sup>7</sup> discussing the causes of epilepsy, divided them into three classes: (1) Gross grain lesions, as brain tumors or abscess, bony pathology, fractures and multiple sclerosis; (2) microscopic brain lesions caused by some toxic agent, the result of chronic diseases, metallic poisons, parasites or endocrinopathies; (3) all cases called idiopathic, due to chemical or bacterial factors, may have an anatomical basis with protoplasmatic defects of structure. This probably includes about 80 percent of epileptic cases.

Block<sup>8</sup> states that worms are more frequent in association with epilepsy than in people without: the intestinal parasites may produce reflex irritation by toxins or there may be actual invasion of the brain by the larvæ of the worms. Cases have been reported which during life had numerous epileptiform fits and, on autopsy, showed numerous cysticerci

in the brain. The absence of parasites in the stools is no proof of their absence in the brain.

Lerish (Lion) believes that the epileptic attacks are due either to anemia of the brain or to changes in the pressure of the cerebrospinal fluid. Out of 11 cases, he observed 6 with increased and 5 with decreased cerebrospinal-fluid pressure. Bourneville points out as a cause of epilepsy in children a forced delivery during labor. Rosett<sup>9</sup> concludes that the epileptic fit is a discharge of midbrain centers when released from the control of the cerebral cortex, and is not a cortical discharge. Cuneo states that the acidosis in epilepsy, which he conceives as liberating the toxic proteose, is due to faulty digestion of starches from deficiency of the alkalization function of the intestinal mucosa and liver, with the consequence that salts of organic acids are set free in the circulation. Lomer believes that the meteorological conditions have a certain influence upon the epileptic fits.

## 2.—The Treatment of Epilepsy

The treatment of epilepsy may be divided into hygienic-dietetic, medicinal and surgical. Every effort should be made to identify the etiological factor and to remove it. The epileptic should avoid excessive mental work and irritative conditions. Cold sponging, cold baths and showers are useful. The influence of proper diet on epileptics is of utmost importance. Alcoholic beverages should be forbidden; meat and salt food largely restricted. The diet should be light and of low protein content.

Goldbloom<sup>10</sup> reported a case of treatment by starvation and rest. The patient, a girl of ten years, was put to bed and given water freely, but no food except a little clear broth for ten days, in order to remove the source of irritation. The result was temporary but satisfactory: while she had sixty attacks during the first 24 hours, after the fifth day, the fits ceased entirely. Two weeks later, however, the seizures gradually began to return. He concluded that starvation treatment may be valuable in those cases of epilepsy in whom there is an intestinal factor.

Personal experiments in Kislovodsk Sanatorium have shown that starvation has no advantage over the exclusion of salt and meat foods at all. In cases where there are symptoms of putrefaction or fermentation, I observed good results from the following treatments:

### 1. Stomach Fermentation

R

Betanaphthol iii 3 grs.

Dispense 10 powders

Sig. One powder three times a day after meals.

or R

Aq. Carui

Aq. Foeniculi

Aq. Menth. pip. aa fl. ozs.

M. Sig. One tablespoonful three times a day.

### 2. Stomach Fermentation and Constipation

R

Flor. Chamomile

Senna pods

aa 1 oz.

Flor. Menth. pip.

Seed Foenicul.

aa ½ oz.

Cort. Frangul.

Fruct. Star Anisi

aa 3 drs.

M. Sig. Pour a glass of boiling water on a teaspoonful of these herbs; let it stand for one day. Then strain and drink it at once at bedtime.

The medicinal preparations have the purpose to remove the causative factors as well as serve as symptomatic treatment. According to the determined etiology of such maladies as syphilis, parasites, intestinal intoxication or endocrinopathies, a corresponding treatment should be ordered. As a symptomatic treatment, in order to decrease the irritability, it is customary to prescribe the bromides as a most effective sedative. Van Locock, in 1853, first recommended them as a remedy for epilepsy.

The experiments on animals have proven that the bromides diminish the electrical irritability and cause changes in the process of metabolism; namely, a decreased excretion of phosphates and an increased excretion of urine. Besides, it is important to remember the peculiar antagonism of chlorine and bromine. The chlorine-ion of the body fluid is replaced by the bromine-ion. This condition (the circulation of the bromine-ion in the blood) causes a decrease of sodium chloride; especially the blood serum seems to be capable of storing up the bromine-ion for long time.

Laudenheimer states that the effects of bromine in epilepsy begins only then when the diminution of chlorides (hypochloride) has reached a certain stage. Van den Velden has proven by experiments that the epileptic fits ceased when hypochloride was produced by salt-free diet or bromine salts, but, as soon as sodium chloride entered the patient's body, the attacks returned. He

concluded that the brominotherapy has the main purpose to induce hypochloride. Max de Crinis<sup>11</sup> has observed good results from the combination of Epileptol (ac. amidoformicicum condensatum) and bromine. It decreases the blood-pressure and the vasomotor tonus. Dose 20 to 50 drops t.i.d.

The calcium therapy for epilepsy was introduced in order to decrease the irritability of the central nervous system. It is of benefit in epileptic cases where there is a deficiency in calcium salts. The French physicians used to prescribe Herpin's powders: Zinc oxide, Extr. Bellad. aa 0.03 Gm., Pulv. rad. Valer. 1.3 Gm.; M. Sig. Three powders daily.

In serious epileptic cases, Crouzon recommended tartar borax. Abodal reported successful results obtained from injections of extr. hypophysis (Dose 20.0 to 30.0 Gm.). Edgeworth cites beneficial results from intravenous injections of a 5-percent solution of peptone (Dose 0.3 to 1.1 Gm. once a week).

Hauptman first suggested luminal (phenobarbital) as an antiepileptic remedy. This preparation has proved useful in epileptic cases, beginning with a dose of 1½ gr., gradually increasing and finally decreasing. Kohs prescribed it for several months in doses of 0.1 Gm. t.i.d., and there was no after effects. According to Held, there were cases of intoxication caused by the administration of luminal during 2 months, even in small doses. Grinker<sup>12</sup> concluded that the best results are obtained in the convulsive types of the disease, with effects that are almost specific. He did not observe mental deterioration from luminal even when taken over many years. It neither causes damage to the viscera nor does it result in habit formation: The art of administering luminal consists in finding a dose suitable to each case. The writer observed the best results in the symptomatic treatment of epilepsy by administration of bromides in the morning and luminal in the evening. A recent case treated by a proper combination of bromine and luminal appears worthy of record.

Report of case. A. G., a man, aged 25, single, a laborer, referred to me in October, 1923, for treatment of epileptic attacks. All of his family are in good health, except one sister, aged 20, who, one year ago, was frightened and became melancholic. The patient states that, till 1919, he was in excellent health, denies any disease in the past except measles during childhood. At the end of 1919, he was injured in the left thumb with the result that he had the first phalanx amputated. Since

then, he began to suffer from epileptic seizures. The first fit occurred 2 months after this injury. The attacks increased gradually. In 1923, he had at least 4 to 5 severe attacks every week. He lived for 2 years on rest and diet, as the doctor ordered; nevertheless, his disease progressed. He complained of severe headaches, dizziness, pain in the chest, insomnia, often double vision; sometimes he was in a dreamy state, weakness of memory, and mentally depressed; his conversation was incoherent. In October, the patient was ordered to observe strictly hygienic-dietetic measures, to take cold baths every day. In addition, bromine (5 gr.) in the morning and luminal (1½ gr.) in the evening was prescribed for a period of one month. At the end of 2 weeks, the patient improved: the attacks became milder and less frequent. At the end of the month, there was a considerable improvement: the general health was benefited, and only one mild fit occurred during the fourth week. One aura was relieved by tying the left leg. After interruption of medicinal treatment for 2 weeks, the attacks returned. I ordered again bromine (5 gr.) in the morning and luminal (1½ gr.) twice daily for a period of 3 months. The result was satisfactory; the attacks stopped and there was a marked physical and mental improvement. The patient slept better, gained in strength and endurance, the memory and the speech were also improved, the double vision disappeared.

As to glandular treatment, it is of great value in some epileptic cases especially where there is a secretory deficiency. Ashe<sup>13</sup> suggested that the administration of gland substances is regarded not only as replacing in part the deficient secretion, but also as stimulating the particular organs to activity. Pluri-glandular extracts favor general secretory activity and produce disthyroidism with disovarianism, probably with dyspituitarism. He has given, to an epileptic girl, corpus luteum for several months, with a marked improvement. Beneficial results followed sometimes also under treatment by ovarian extract, 1 grain before meals, daily. The writer observed relief from administration of ovarian or orchic substances, in doses of 10 grains daily, in cases of epilepsy developed at puberty or at menopause, but the attacks reappeared when the treatment was discontinued. It is known that chronic absorption of toxins is accompanied by a fall in the concentration of the ionized calcium. In cases where there is found a deficiency of calcium, the administration of

parathyroid raises the content of ionized calcium to normal. Martinet<sup>14</sup> recommended to give, during 3 weeks, every morning, 1 tablet of corpus thyroid 0.1 Gm.; and to repeat the same after an interval of 2 weeks.

Surgical treatment is indicated in cases where there is some localized irritative factor, as tumors, scars, or fractures. The proposed operative method of extirpation of the supra-renal glands has been abandoned. In selected cases, Gaines advises drainage of the spinal fluid at intervals of from 2 to 6 months. Lerish recommends bringing the spinal fluid to normal pressure by intravenous injection of distilled water to patients with a low pressure. In cases where there is an increased pressure of the spinal fluid, it is of benefit to administer intravenous injection of hypertonic salt solution.

### Summary

1.—In spite of extensive investigations, the pathogenesis of epilepsy still remains obscure and unsolved.

2.—The treatment consists of prophylactic, medicinal and surgical measures. A diet that is for the most part vegetable and salt-free is of utmost importance. Among the drugs, luminal is the most reliable. The dose large enough to control the convulsions has no deleterious effects. The individual suscepti-

bility to bromine and luminal should be carefully studied. The glandular treatment is worthy of further investigation. Surgical operations are of value in cases of injury to the skull or brain.

3.—In order to determine the proper diet and medication, it is important to find out the pathologic changes of the body and disorders of metabolism, which are reflected in the body fluids.

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## A Successful Treatment for Eczema

By J. A. DUNGAN, M. D., Greeley, Colorado

IT MAY seem paradoxical to mention so protean a disease as "salt rheum" and speak in the same breath of a successful treatment—meaning by this a single plan of treatment applicable to all cases. But, if the reader will follow me closely, I think that the apparently impossible phase in this will come to appear possible.

More than a hundred years ago, Bateman defined eczema as "a non-contagious eruption, generally the effect of irritation, whether internally or externally applied, occasionally produced by a great variety of irritants."

Beyond a more intensive study of the protean manifestations of eczema and a definition of them, and a pathological classification into their various symptomatic appearances objectively, nothing of great importance has been added through the years to the foregoing definition.

Thus, we see that, whether eczema appears as erythematous, papular, vesicular, pustular, or as some further classification of the latter into "rubrum," "squamosum," "fissum," or in-

deed, "hypertrophic," we may still rest securely upon the original definition of Bateman, knowing that, in the end, we have only to deal with an inflammation of the lower layers of the skin, or of the dermis.

The inflammation may have been brought about by undigested particles of food which, entering the thoracic duct from the lacteals of the intestinal mucosa, carried thence into the blood by way of the vena cava, and unable to be eliminated by any of the other emunctory channels, are attempted to be thrown out by way of the skin of the individual.

Eczema may have been brought about by chemical irritants. It may be an occupational disease. But, whatever may have been the exciting cause, I wish to emphasize again that we still have to deal with simply a more or less chronic inflammation of the true skin, or dermis. It may be taken for granted, therefore, that no search, with the object of revealing the special cause in each case of eczema, will have been directed amiss, especially if it has the happy fortune to make known



whether dietary indiscretion was the etiological factor (in which case a proper regimen should be instituted and enforced), or if the handling of irritant chemicals, as in one's occupation might have caused it (in which case rubber gloves should be resorted to or some other means of protection adopted) or if, finally, some other agent should have been determined to have acted to cause the disease and against which adequate measures may be prescribed. Whether or not it has the happy fortune, as above stated, such an intensive investigation should be made in each case that presents itself for treatment.

Tuberculosis or syphilis may each have a share in the causation, and any treatment adopted will have to be formulated with a view to this fact.

Seeing, then, that we have to deal, as far as the objective symptoms go, with a simple inflammation of the dermis, the medicinal treatment (it may as well be said now as at some time later on) will necessarily be locally applied.

Let us now see what such a local treatment may be called upon to deliver to the seat of the inflammation.

First, let us turn to Dorland for information as to the exact definition of the various high-sounding terms applied by common consent to the various pathologic manifestations observed on the skin of eczematous patients:

1.—*Erythematous*: of the nature of erythema, i.e., a morbid redness of the skin, due to congestion of the capillaries, of many varieties.

2.—*Papular*: consisting of, characterized by, or pertaining to a papule, i.e., a small, circumscribed elevation of the skin.

3.—*Vesicular*: composed of, or relating to, small, sac-like bodies; pertaining to, or made up of, vesicles on the skin—small circumscribed elevations of the epidermis containing a serous liquid, i.e., blisters.

4.—*Pustular*: pertaining to, or of the nature of, a pustule, i.e., a small elevation of the cuticle filled with pus or lymph; (a) compound pustule—one which is made up of more than one chamber; (b) secondary pustule—one which is preceded by a vesicle or papule; (c) single pustule—one which consists of a single cavity.

*Malignant Pustule*, or anthrax, need not be considered in the present discussion.

The inflammatory action in eczema is practically always chronic: cases appearing to be of an acute nature being more than likely acute exacerbations of a chronic affection.

Having an inflammation of the dermis, or cutis, with an overlay of congested capillaries in the epidermis, or cuticle, the primary need is, for a medicine exhibiting anti-inflammatory qualities. One would seem to be ideal for the purpose which, by acting upon the vasomotor nerve filaments, causes dilation of the capillary structure thus facilitating the escape of the stagnant blood current towards the heart and lungs for purification.

*I selected veratrum viride for this purpose.*

In the first place, the remedy is easily absorbed by the skin, even in its congested condition, and its action is almost immediately felt by the patient as a cooling effect in the area where before all was heat and itching.

Albert Merrrell says of *veratrum viride*, "It is most useful, as a remedy in the congestive stage of inflammation—the tincture undiluted will frequently arrest local inflammation, as of abscess, boils, tonsillitis, etc. Apply with a camel's hair brush."

Another author says, "It is especially serviceable when there seems to be obstruction of the venous capillary circulation—face and skin are flushed but usually of a full, dull, dark hue. In these cases, *veratrum* removes the artificial pressure and permits or even assists the more rapid removal of venous obstruction."

The same authority speaks further along as to the marked properties of *veratrum viride* as an alterative in syphilitic subjects, hence its applicability to eczematous patients with a history of lues.

But, since, in eczema of whatever variety, the emunctory glands of the skin are in a very diseased state, and hence unable to throw off the irritant poisons absorbed from within or applied from without, we are conscious of the urgent necessity of an alterative of undoubted virtue and power with which to restore these glands to their normal efficiency, and, to fulfill this latter indication, I chose *phytolacca decandra*.

Here again, we have a remedy easily appropriated by the skin and which serves admirably for the purpose we have mentioned.

One competent authority, speaking of *phytolacca*, says of it: "*Phytolacca* (*decandra*) is a stimulant to the ganglionic nervous system and is of marked utility in aberrations of the functional tissues. . . . Cutaneous eruptions, syphilitic or otherwise, and ulcerations, when due to depressed function or imperfect secretion, come under its curative influence."

Another well-known author says of *Phy-*

tolacca decandra: "It is directly indicated in irritation, ulceration, as sanious ulcers, scabies, tinea capitis, sycosis, psoriasis, favus, *noli-me-tangere*, and it is especially valuable in the squamous variety of skin diseases.

Probably the most constant symptom of true eczema, in whatever form it may present itself, is itching. This may be accompanied by burning, but, unless itching is present, we are likely to doubt whether it is eczema.

It will be at once apparent, therefore, that a prominent (if not the most prominent) indication for treatment is the relief of this itching.

Happily, we have at hand a remedy which may be depended upon with absolute assurance to accomplish this most necessary end and do it with promptness—*pix liquida*. It is directly curative to all of the eczemas characterized by scaly eruptions of the skin. It corrects fetor and promotes healing. It will be found curative in all disorders of the skin attended with itching and burning, i.e., squamous eczema with itching. It has also a well-known ability as a powerfully curative agent in tuberculous states of the skin or elsewhere, and particularly where the former assumes the condition known as eczema.

For many years, it has been a matter of common knowledge that, since eczema was an inflamed state of the true skin, any treatment, to be successful, must in some way be made to reach the seat of the inflammation.

No matter how great the virtues of a local remedy for eczema, it would patently be impossible for it to result in more than slight benefit unless some method was found to force it through the epidermis. This was found to be possible by vigorously rubbing-in of the medicament, oftentimes using for the purpose some agent possessing a rough surface. In one case that I remember, a prescription called for the use of a corn-cob! If the patient was able by any chance to survive the "corn-cob," he might get well of the eczema. Was there not some way in which this punishment to the patient, always considered necessary in order to effect the desired results, could be avoided? The vigorous rubbing, with a rough agent, would undoubtedly remove the top layer of the skin and allow contact of the medicament with the inflamed area. But, could not some agent be found which would cause penetration of this diseased and friable cuticle without the traumatism of the rubbing? I found this agent in precipitated sulphur, modified by admixture with the other

ingredients (and the menstruum which I shall mention presently) by heating, in a water-bath, until evaporation had proceeded to a certain consistence.

Sulphur, we are warned abundantly by able authorities, except in parasitic eczema, is a violent irritant to eczematous conditions and should be carefully avoided. But, it does not prove so beyond what is necessary to produce penetration, if prepared after the manner which I shall soon describe. To show the exceptional applicability of sulphur in all other ways to the present needs, allow me to quote again from Albert Merrell: "The influence of small doses is obtained by administering sulphur in doses so minute as to be completely absorbed—and it is of the greatest usefulness in affections of the skin, mucous membranes, portal system, and glandular apparatus, to antagonize the stagnation or impairment of the capillary circulation in their tissues which causes the various engorgements, exudations, suppurations, eruptions and aberrations of secretion to which they are subject."

For every application to the skin, possessing potentially irritating properties, an emollient base is necessary.

Let us now consider for a moment the somewhat complicated method of preparing these various ingredients enumerated for use in cases of eczema. Following this, I shall present ten cases selected from among several hundred to illustrate the applicability of this preparation to the various manifestations of eczema.

Alcoholic extracts of veratrum and phytolacca would plainly be impossible. So, an infusion in water is made of the prepared plants. These two infusions in equal proportions are placed together in a large evaporating dish. This, in a water bath, is evaporated to a salve-like consistence.

The *pix liquida*, the sulphur (the latter in the proportion of one to a hundred of the former) and an amount of the emollient base, calculated to be twice the bulk of the whole by weight, are then mixed. To this water is added, in equal proportion by volume, and this is also subjected to evaporation to the former consistence. The two separately prepared components are then mixed and triturated thoroughly. The product is now heated, at a uniform temperature, in a sand-oven for two hours. The temperature maintained is 65°C. (148° F.).

This results in a dark green salve which should be dispensed in one- or two-ounce jars, with directions to apply lightly once or twice

daily, with as little rubbing as possible, to the involved areas, the warning being extended to the patient that, for the first application or, possibly, the second or third, irritation may follow the application. A cure may be confidently expected in any of the varieties of eczema. This latter statement will be looked upon as an attempt to "draw the long bow"; but I make the statement with a full knowledge of that fact and, as evidence of my good faith, I have had my druggist prepare a large quantity of the salve, samples of which will be sent to any physician desiring them, the only requirement being that he shall, after a proper use of it, acquaint me fully with the special nature of the eczematous case treated with it, the initials, age, and sex of the patient—these data for use in connection with the publication of future articles by me, and as collected data of cases and results.

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Case 1.—Mr. S. F., æt., 40. Squamous eczema of hands; duration fifteen years. Came to me in 1914 with a history of having tried "everything and everybody." Cured.

Case 2.—Mrs. G., æt., 65. Chronic pustular eczema rubrum affecting genitalia externa and the inside surface of the thighs. She consulted me in the year 1921. As is generally the case with this type of eczema, her case had proved intractable, having resisted treatment for thirty years. Cured.

Case 3.—Mr. J. H., æt., 30. Saw me in 1913. He had had pustulosquamous eczema for a year, involving his entire scalp. Cured.

Case 4.—Mrs. F. B., æt., 27. Eczema (pustulo-fissum), of two years' duration, which had resisted all treatments tried. Cured.

Case 5.—Mrs. H. B., æt., 50. Consulted me in 1914 with history of several years of almost continuous itching from eczema erythematousum. Cured.

Case 6.—Baby R., æt., 6 mo. Brought to me early in January, 1924. Crustaceous eczema of the scalp and face; spreading continually from scratching to relieve the itching. Cured.

Case 7.—Mrs. B. W., æt., 18. Called me in 1916. Entire skin of body affected with pustular eczema, with chronic and acute areas discoverable in different regions of the body. Nutrition low and patient unable to leave bed. Cured.

Case 8.—Mr. R. D., æt., 35. Vesicular eczema involving hands and arms. The disease had lasted several years. It would appear to have been cured but would invariably return. He had taken treatment at different spring-resorts and at prominent clinics. Cured.

Case 9.—Miss L., æt., 16. Papulosquamous eczema involving face. Some of the eruption and scaling in the hair. Duration, one year. Treatment up to the time of consultation ineffective. Cured.

Case 10.—Mr. J., æt., 80. Consulted me in 1917. Skin of arms and legs thickened and indurated. Elsewhere, patches of an erysipeloid eczema. The disease had lasted sixty years and had been intractable to treatment. Cured.

*Verbum sapienti satis.* Give this formula a trial in your obstinate cases.  
1539 Tenth Ave.

*LET us keep the mind clear and bright, fill it with wholesome thoughts of life, and be kindly in our feelings towards others.*

*Charles Brodie Patterson.*

# Surgical Seminar

Conducted by GUSTAVUS M. BLECH.

SO many letters have come to me, expressing appreciation of the Seminar, that I would not be human not to be pleased. I am endeavoring to make personal replies in all instances, but, until these reach the correspondents, I ask all to accept my sincere gratitude and to make our pleasant relationship of editor and coworkers a lasting one.

## Surgical Problem No. 16

Recapitulation: A married woman, aged 26, apparently pregnant and in good health, is awakened from a deep sleep by excruciating pain in the lower abdomen. A hypodermic of morphine brings complete relief. Early the following morning, the patient has another attack and complains that her "insides are giving way." The summoned family physician now finds a pulse of 130, a rise of temperature, tenderness all over abdomen, and he diagnoses rupture of the appendix.

On consultation, an hour later, the patient still complains of pulling pains; she is restless, but does not offer decided evidence of septic peritonitis. The abdomen seems more tender in the left flank. Rectal examination shows an elastic and tense body; vaginal examination reveals a uterus pregnant about four months. Laterally to the left, is a round, soft mass, which cannot be mapped out satisfactorily, but appears to the touch like a cyst of orange size. Operation was done the same day. The requirement calls for the preoperative diagnosis.

## Gen. Geo. Acheson, Kingston, N. B.

Our good, old friend summarizes the consultant's opinion in a few terse sentences, masterful for their richness and scope:

There are at least four conditions which might suggest themselves to the consultant in this case: (1) ruptured appendix, (2) ruptured ovarian cyst, (3) ovarian tumor with twisted pedicle, and (4) ruptured extrauterine pregnancy.

As regards the first, the history and physical findings are rather against such a diagnosis. An absolute differential diagnosis between the other three is, I think, not possible without opening the abdomen. An x-ray examination might reveal the nature of the trouble. But,

this is an emergency case, with no time to lose, and laparotomy is indicated in any event.

We assume, as correct, the opinion that the uterus contains a three- to four-months' fetus; and we know that there are numerous cases on record where intra- and extrauterine pregnancies have occurred at the same time. Howard Kelly, in discussing the differential diagnosis of ectopic from normal uterine pregnancy, remarks, "It must never be forgotten that a patient may present an extrauterine and an intrauterine pregnancy at the same time." In the case under discussion, the symptoms fully accord with what are usually found in ruptured tubal pregnancy—the sudden onset of severe symptoms, extreme pain and abdominal tenderness, nausea, vomiting, fast pulse and increasing temperature.

But, the finding by rectal examination of a soft, rounded mass with all the characteristics of a cystic growth, to the left and below the uterus, points to an ovarian, or parovarian, tumor rather than to a hematocele arising from rupture of an ectopic pregnancy. Here too, the sudden onset of severe symptoms would be expected in case of rupture or of pedicle twist. Therefore, I would approach the laparotomy with an open mind.

## Dr. Isaac E. Crack, Hamilton, Ont.

Dr. Crack, who seldom fails us and who always sends in solutions which bear the earmarks of sound reasoning, writes:

The sudden onset of excruciating abdominal pain, in a married woman who has missed a few menstrual periods and who has had "morning sickness," is always very suggestive of a ruptured extrauterine pregnancy. As this woman had a uterus, apparently four months pregnant, it is very unlikely that the two conditions exist together. A ruptured appendix is quite clearly ruled out. My diagnosis would be, an ovarian cyst the pedicle of which has become twisted. This would account for her symptoms of pain; vomiting, elevation of temperature, rapid pulse and tenderness. The pelvic findings are in keeping with this diagnosis.

## Dr. T. Howard Plank, Chicago

Dr. Plank is well known to readers of the Journal as a man who has accomplished much good by his work as a radiologist and helio-therapist, especially in incurable cases. As I operate now and then in the hospital with which he is connected, I have had occasion to see him at work. I was, therefore, pleased

to receive from him the following unsolicited contribution:

Problem No. 16 is a clear case of tubal pregnancy. With the history of missed periods, a mass in one side of pelvis and sudden onset of pain, there is little doubt as regards a positive diagnosis.

If with these symptoms there is dribbling of blood from the uterus, I always feel certain. The sudden onset of pain is due to rupture of the tube.

#### Dr. Dermenjian, Detroit

Dr. Dermenjian is a newcomer. Dr. Achard advises me that he is a new reader who is in full sympathy with the aims of the Seminar and that he has not only subscribed but promised to send in regular contributions as a "mental exercise." I am sure, all readers will be glad to hear from him again and again, after reading the following discussion:

The history and the physical findings of Problem No. 16 suggest it to be a case of obstructed or ruptured hollow viscus, located at lower left quadrant.

Let us tabulate our findings:

1. Sudden and severe pain at left lower quadrant, requiring morphine.
2. Fast pulse (130) with rise of temperature. (We have to know how much).
3. Nausea and vomiting.
4. General soreness all over abdomen, more so at left lower quadrant.
5. A mass at left lower quadrant, cystic to touch, and palpable, both, per rectum and vaginam.
6. Uterus apparently four months pregnant.
7. No history of previous ailment as a cause.

Possibilities:

A. *Intestinal Obstruction*.—If it occurs at lower end of sigmoid, it will give most of the symptoms tabulated above, but the location of the mass as palpated by vagina is not so characteristic of it. Again, the patient would be looking more sick.

B. *Left Ureteral Stone*.—Many of the symptoms will be explained by it, but a patient with a stone will generally have a history, and again the urinary findings will be a help to us. The mass can't be explained by it, unless there is rupture and hemorrhage following it.

C. *Perforative Peritonitis*.—Symptoms 1, 2, 3, 4 and 5 will be explained by it; but, before such a perforation there is always some complaint and ailment, as stomach ulcer, which is lacking in this case. Again, as the consultant noticed, she didn't have the characteristic appearance of acute septic peritonitis.

D. *Ectopic Gestation*, with rupture of the tube and resulting hemorrhage, would be very plausible if the pregnancy were not so advanced, i. e., four months. A tubal pregnancy will give trouble at or about the second month. Again, the uterus wouldn't be the size that it is in this case.

E. *Diverticulitis*.—This is hard to exclude, too, but the patient doesn't seem to be sick enough, and no previous history of this ailment is given. The mass would be explained

only if there were rupture and resulting hemorrhage and peritonitis.

F. *Ovarian cyst with twisted pedicle*.—This will explain all the symptoms and may accompany normal pregnancy. It is hard to differentiate from.

G. *Ruptured Ovarian Cyst*.—Hemorrhage following the same will nicely explain the location and the feel of the mass.

In both of the last instances, a previous examination most probably would have shown us the presence of the cyst. Then the diagnosis would be easier. So, my preoperation diagnosis would be, ruptured ovarian cyst.

#### Dr. Emil C. Junger, Soldier, Ia.

The Sunday that I give up to prepare the Seminar is a sort of mental visit with my friends, in the little den containing the letters on the work table. Each has characteristics of its own, but one especially filled with quaint philosophy, reads:

While I am delighted at several correct solutions, I dread the possibility of a "miss." But, this will be partly your own fault, for you should have asked for a postoperative diagnosis rather than a preoperative committal. But, here goes. As this woman gives no history of pelvic pathology, we presume that there is no fibroid or ovarian cyst present, to become twisted on its pedicle or to be the seat of hemorrhage. Neither would I suspect a pus tube. I would like to know (as you no doubt did before operation) the menstrual history before this pregnancy. I am inclined to the belief that we have here to deal with a blood clot produced by a ruptured ectopic pregnancy, with a prospective American citizen temporarily making his residence in the uterine cavity, as, otherwise, we would have had hemorrhages simulating an incomplete abortion. At any rate, such an "acute abdomen" calls for prompt laparotomy and exact surgical care of whatever pathology section will reveal.

#### Dr. Alexander D. Chidlow, Chicago

After modestly asserting that he has been deterred from participation in the discussions, simply because of fear that he lacked the essential qualifications for authorship, Dr. Chidlow proceeds to demonstrate that his fear has been groundless. He says:

The history and symptoms point to ruptured ectopic pregnancy involving the broad ligament.

The reasons for this diagnosis are: The patient is married, gives a history of having missed three menstrual periods and, without any previous history of illness, is awakened from profound sleep with excruciating pain in the lower abdomen, temporarily relieved by morphine; with a return of the symptoms, plus rapid pulse, slight rise of temperature and with greatest sensitiveness in the left flank of the abdomen. The pulling pains are due to the formation of a hematoma in the folds of the broad ligament. Rectal and vaginal examinations confirm the presence of a tumor to the left and below the uterus, which is pushed up.



The entire clinical picture suggests differentiation from a ruptured appendix, retroflected gravid uterus, nephroptosis, nephrolithiasis, threatened or complete abortion.

We rule out ruptured appendix by the absence of sepsis, by the tenderness being more intense on the left side and by the continuance of the pulling pains after the alleged rupture. Retroflexion of the gravid uterus can be excluded through the absence of urinary suppression. (The bladder may extend as high as the umbilicus and as wide as to the inguinal regions.)

The only symptom worth mentioning for nephroptosis is the tumor and, as regards nephrolithiasis, the pain does not radiate along the course of either ureter. Finally, there is absence of characteristic changes in the urine, e. g., tinging with blood, etc.

Abortion would show some discharge from the cervix, regular contractions with pains not restricted to one side and occurring at more or less regular intervals, if incomplete. As for complete abortion, the expulsion of the product of conception is the *sine qua non* for such a diagnosis.

**Dr. O. J. Colwick, Durant, Okla.**

Believing the free and cordial discussion of the diverse problems, which have appeared in the past, to be sufficiently interesting to cause many to await the solutions with eagerness, Dr. Colwick adds his own solution as follows:

The history of an early pregnancy, the sudden onset of excruciating pain and a fast pulse, etc., indicate a ruptured ectopic pregnancy, but, as the examination revealed a uterus about the size of a four-months' pregnancy, with a mass to the left, I would say that the patient had a normal, in addition to, an ectopic pregnancy. Else, she could have had a normal pregnancy coincident with tumor of the left ovary, the tumor becoming twisted on its pedicle, which would produce the above-named symptoms. If there were no symptoms characteristic of internal hemorrhage I would make a diagnosis of ovarian cyst with twisted pedicle.

**Dr. James A. Dungan, Greeley, Colo.**

Our old friend sends a letter in all haste, panting for breath, as it were (offering a solution also in the case of Major F., which is too late for publication, but which is being sent on to the sick comrade), and apologizing for his lateness by having been very busy and not because of lack of interest. Now, I am going to let our friends in on a little secret which, I trust, Dr. Dungan can explain somehow

Some time ago, Dr. Martin, of the *Medical Pickwick*, misused our friendship of over a quarter of a century, to inveigle the editor into writing a short story or sketch for his medicoliterary monthly. I told him, I was too busy to write a short story, but I just had time enough to write a novel, actual two-fifty size and worst seller to boot. The darn thing,

which is costing me sleepless nights worrying how to bring together my hero and heroine, appears as a serial. At the same time, I read in the selfsame magazine a serial, entitled "The Diary of a Neurasthenic," which is about as fine a piece of writing as I ever read. Now, Brother Dungan, if you are that busy,—how come?

Our medical Mark Twain redivivus writes:

The symptoms enumerated in Problem 16 give us a perfect picture of extrauterine pregnancy in the left tube or ovary. True, we would ordinarily have the escape of blood *per vaginam*, but this would not necessarily be the case. The woman has had an escape of hemorrhagic blood into the left Douglas' cul de sac with further hemorrhages imminent; hence the necessity of immediate operation.

**Dr. A. H. Bullock, Cushing, Ia.**

Dr. Bullock responds to our appeal for more active participation in the Seminar work, by sending the following discussion:

My diagnosis in this case is, left ovarian cyst with twisted pedicle. These cysts seem to be very common in women without producing any symptoms that may direct attention to their presence. But, let pregnancy supervene, as in the case presented, lifting the uterus out of the pelvis into the abdominal cavity, where the cyst is not so restricted in its movements, and then trouble of a serious nature is likely to be the consequence. A cyst in this location would be painless and without symptoms until its blood supply is interfered with by a twist of the pedicle. This, in turn, is responsible for the pain, nausea and vomiting noted in the case under consideration.

**Dr. W. W. D. Akers, Hooker, Okla.**

Dr. Akers has been engaged in practice in small country towns for twenty-seven years, and, naturally, has been considerably thrown on his own resources. He regrets, in a personal note to the editor, that there is no way to compel young physicians to publish scientific work at regular intervals, to develop the faculty of recording experiences. The absence of such a law is no hindrance to this pioneer, for he presents a solution as clear as it is unique in conception; a factor which makes his discussion exceedingly useful and profitable, in spite of the fact that the diagnosis is at variance with the one made by me before operation, or even thought of, and perhaps just because of it. Dr. Akers says:

I am of the opinion that we have a case of strangulated femoral hernia. I base this opinion on the following facts: Outside of the symptoms incidental to pregnancy, the patient presents a history of having been well. There is no history whatever indicating attacks of indigestion or abdominal pain; in other words, the patient's past history offers absolutely nothing to indicate appendicitis, tubal pregnancy, nephrolithiasis or pelvic abscess.

Pain coming on suddenly and followed by vomiting of a sympathetic or reflex character, which is relieved by an opiate as long as the patient remains quietly in bed, with a return of the symptoms when the patient arises, the finding on physical examination of a uterus pregnant four months with a cyst-like tumor below and to the left of the uterus, all these facts indicate to my mind, a strangulated hernia of the femoral type.

**Dr. Edmund D. Levisohn, Chicago**

Dr. Levisohn, whom I know personally to be one of the progressive members of our profession, contributes the following able presentation:

We have before us a young married woman, twenty-six years of age, who gives a history of disturbed menstruation and other signs of a possible pregnancy. The pain and tenderness are more particularly severe on the left side. Temperature up after a hypodermic of morphine. No backache, no rigidity of the right rectus, no appearance of septicemia, no general distention of the abdomen. This, to my mind, rules out the possibility of either acute ruptured appendix or perforation of the gut.

Going further, we find, on rectal and vaginal examination, a soft, yielding mass to the left and below the uterus. Now then, dear doctor, had you added to the clinical picture, the general pallor and shock and a history of a day or two of scanty menstruation instead of a complete cessation, you would have given us a very complete picture. However, leaving us a little in doubt, is an extremely interesting thing. I will, therefore, make this my preoperative diagnosis and by it feel that you were justified upon insisting on immediate operation. Your patient was suffering from a ruptured ectopic gestation of the left side.

**Dr. H. K. Shumaker, Bellevue, O.**

Dr. Shumaker sends a carefully-prepared solution, which he has thought out systematically. He writes:

In great probability, the woman is pregnant, but there is also a serious pelvic condition which demands prompt surgical care. If the "round, soft mass" to the left of the uterus was very tender and Cullen's sign was present, my diagnosis would be a ruptured tubal pregnancy. But, since the normal pregnancy was past three months, and a tubal pregnancy usually ruptures at six weeks, it seems proper to interpret the soft mass as a small ovarian cyst with twisted pedicle. If this was the case, why was there a rise of pulse and temperature, with probably a fall in the blood pressure? Only bleeding into the peritoneal cavity would cause these symptoms on the day after. It must also be borne in mind that rupture, with hemorrhage of a follicle of a diseased, enlarged and prolapsed ovary, may simulate the very symptoms described in the problem.

**Dr. Martha K. J. Blanchard, Kirk, Colo.**

This doctor, who is a graduate of one of the medical colleges in Chicago, and who has

written the editor of the Seminar a rather pointed letter in re "woman in medicine," evidently mistaking my sharp criticism of neglect of professional obligation in one person as applicable to all women (and those, who have read my contributions to this Journal, in the past two years, should remember that I have chastised male charlatans even worse), comes to a diagnostic conclusion which is very interesting. She writes:

The sudden onset, fever and abdominal pain are suggestive of acute salpingitis.

The physical examination, as reported, together with the description of the phenomena observed make me think of ovarian abscess. The pulling pains in lower abdomen and the absence of septic peritonitis and shock exclude cyst and tubal pregnancy.

**Dr. Ray S. Wycoff, Humacao, Porto Rico**

The history of missed menses, morning sickness, and then the severe pain coming without warning and waking her out of her sleep—all this is characteristic of ruptured extrauterine pregnancy. Then, the further severe pain, the next morning on rising, tends to strengthen this idea, as do the increased pulse (hemorrhage), nausea and vomiting. The increase in temperature is not incompatible with this diagnosis.

The tumor mass felt posteriorly to the uterus might, of course, be a cystic ovary, and torsion of its pedicle could produce most of the immediate symptoms. While it might be accompanied by temporary disappearance of the menses, it would not be so likely to produce morning sickness; nor would the pain of a twisted pedicle be relieved so quickly by a hypodermic.

Enlargement of the uterus takes place in ectopic pregnancy to a certain extent, reaching the size of a two or three months' pregnancy, according to Graves and DeLee; but it would hardly be expected to occur in cystic disease of the ovary.

My preoperative diagnosis is, ruptured ectopic pregnancy. But there is one question which sticks in my mind in making that diagnosis, and that is, the size of the uterus. Your account says, that it was the size of a four-months' pregnancy and, though I have operated on only a few ectopic pregnancies, I have never seen a uterus that began to approach such a size, nor can I find such a statement in any of my books. So, I am wondering if you found here a combination of ectopic and normal intrauterine pregnancy.

**Dr. F. J. Pritham, Greenville Jct., Me.**

In regard to No. 16. This is a ruptured left tubal pregnancy. The time is right, second or third month. The sudden onset, the mass of blood felt in peritoneal cavity per rectum and in broad ligament, per vaginam, with the tenderness on the left is conclusive evidence. It is not an appendix; no previous history, no tenderness in right side, no drawn facies or sepsis being present. The pulse is that of hemorrhage.

Preoperative diagnosis is very essential for, unless one feels able to handle the bleeding,

he had better let the belly stay closed till he can get some one who can. For the patient won't bleed nearly so fast with the belly closed. I have had the pleasure of seeing several of these cases and have not lost one yet, though my deceased colleague lost one, the last case he ever took a knife to. He would never operate again feeling that he has passed the time when he was a safe man to undertake a major operation.

Unfortunately, space is lacking to reproduce further contributions in detail. The discussions are uniformly interesting and evidently dictated by a keen interest in the problem and an earnest desire to participate in the work of the Seminar. In the following, we refer briefly to some of the other discussions that have been received.

In the opinion of Dr. C. A. Hughes, Siloam Springs, Ark., the preoperative diagnosis is ovarian cyst (left) with twisted pedicle sufficient to cut off circulation. Rupture of the tube is eliminated by the quick rise of temperature and by the physical findings.

Dr. C. Plumlee, of the Plumlee Hospital, Roy, New Mexico, takes the case to be one of ectopic pregnancy that had ruptured during the night. Restlessness and rapid pulse would be due to hemorrhage; the tense, elastic tumor is probably formed by the embryo with its membranes; the soft, round mass contains blood or other fluids. In any case, the indications for immediate operation are clear.

Dr. M. C. Hurd, Pasadena, Cal., takes into consideration the possibility of salpingitis, ovarian cyst, uterine fibroid and ectopic gestation. Salpingitis and uterine fibroid are ruled out for reasons which the doctor outlines. Ectopic gestation also is made improbable by the size of the mass and of the uterus and by the history. He concludes that history and findings are those of ovarian cyst. "A multilocular ovarian cyst with twisted pedicle, perhaps gangrenous, discharging free bloody serum into the peritoneal cavity, would produce exactly these conditions."

Dr. Clymer D. Jeffries, Williams, Ariz., reduces the choice of possible conditions to torsion of pedicle of ovarian cyst and rupture of tubal pregnancy. His diagnosis is acute torsion of pedicle of ovarian cyst, complicated with pregnancy. No matter what the diagnosis, an operation is indicated. He can not see the justice of diagnosing appendicitis, "in spite of the fact that one of our local nurses once made the remark, that 'appendicitis very frequently happens on the left side.'" The doctor adds, she was no R. N.

Dr. Elias Margo, Covington, Okla., makes

the diagnosis, ectopic pregnancy ruptured on the left side.

Dr. R. F. Courtney, Lowell, Mass., also believes that this was a case of ectopic gestation and he offers a very good discussion in favor of his diagnosis.

Dr. G. J. Warnshuis, Forman, N. D., who discusses not this, but the preceding Surgical Problem (No. 15) makes some general remarks which I can not resist the temptation to reproduce. He says:

"Your case discussions have such a faculty of going to the bottom of vital questions in diagnosis, that I feel constrained to express my appreciation of your decidedly unusual style of instruction and, incidentally, I feel as though I should like to 'horn in' on the problems. While these problems are essentially of concern to the surgeon, yet, the general practitioner is above all things an 'emergency man' and such reading keeps his interest alive and his mind alert to difficulties that a sudden call may at any time confront him with. When one is practicing three hundred miles from a first-class hospital and is obliged to choose between advising a useless and expensive journey or a fatal delay, his ability to make an early diagnosis is put to a greater test than that of the operating surgeon. [That is exactly the reason for the Seminar. It is intended to aid those medical men who are out, far, dependent upon their own efforts, who so often have to bear a heavy burden of responsibility in advising operation.—Ed. A.]

### EDITORIAL COMMENT

The first question that suggests itself is: How life-like has been the description of the condition the patient was in at the time the consultation was held? Let us see: I said that, when I saw the patient, I noticed with satisfaction that she did not present an appearance characteristic of acute septic peritonitis. This ruled out the perforated appendix diagnosed by the attending physician.

The woman was pregnant. When a uterus has all the characteristics of a four-months' pregnancy, the chances of the softness of the cervix and enlarged corpus being due to something else are nil. Nothing was said about flow, bloody or otherwise from the uterus, because nothing like that was present.

She had a rise of pulse and of temperature. I did not give the exact degree, either because I did not take the temperature (I do not possess a thermometer), or else because I have forgotten it. The demand for this by one

contributor appears to me as one not based on special importance. Why? Because it suffices to know that there was a rise. I have come to look upon the relation of temperature to pulse in only one way, in abdominal lesions. If the pulse is fast and there is a corresponding rise of temperature (one or two degrees, I care not which), the situation is hopeful; if, on the other hand, there is a fast pulse and a subnormal temperature—then we have a very serious situation. The mere statement that there was a rise of temperature, should, therefore, be of some diagnostic aid to us.

The points brought out by several contributors are so fully described that I need not enter into details. The arguments in favor of a ruptured tubal pregnancy are weighty, but not conclusive.

One thing has been forgotten and that is that, if our patient had had two distinct attacks, we would have found her exsanguinated and then there would have been no rise in temperature. On this point alone, any rupture and resulting hemorrhage could have been ruled out, as we did the attending physician's diagnosis.

I said to the physician that the finding of a distinct cyst-like growth speaks for either a twisted pedicle or a small rent in the cyst wall, pouring the liquid contents into the peritoneal cavity. But, if the latter were the case, I should not expect a repeated attack of pain, and that, in my judgment, there was a cyst, parovarian or ovarian, pediculated, with tor-

sion of the pedicle, and that operation should be done at once.

Operation was performed at about 11:30 a. m. and lasted a few minutes. The diagnosis of parovarian cyst with a pedicle twisted 720 degrees was confirmed by all present. Absolutely uneventful recovery, except that, five days later, the patient expelled a four months' fetus.

The discussion was splendid. I thank all for their support and urge all to try again, always remembering that cases are presented as they were seen or, when borrowed, as described elsewhere.

### Surgical Error No. 3

A woman became infected with what was undoubtedly gonorrhea, in 1912. The infection was acute and typical and was treated by two physicians with douches, balsamics, ice packs, rest, etc. The patient made a slow, but clinically good recovery.

In 1915, she went to a surgeon to urge him to do something to enable her to have children.

The surgeon diagnosed a stenosis of the uterine os. He made a vaginal smear, found it free from gonococci and dilated the uterus with a Goodell. Two days later, the woman developed peritonitis and came near losing her life.

Requirement: Discuss the surgical error involved.

### Words or Wreathes

**I**F you will give me some attention while I'm living,  
And not leave it all to give when I am gone,  
It will mean that I'll appreciate the giving  
And thank you—when I can not later on.

A smile, a word of comfort, is a pleasure  
And it helps to clear the dark skies overhead,  
And I feel that now 'twill help me in a measure;  
For I may not know you did it, when I'm dead.

Let us cheer our friends a little, while they're living,  
We can find so much to praise, if we but try.  
One flower of joy that springs from out such giving  
Is worth a million roses—when they die!

E. A. NASH, M. D.

Peterson, Iowa.

# Good Medicine

Let us learn as we go, but not forget what we know

Conducted by GEORGE H. CANDLER

## Seasonal Diseases

### No. 2—Marriage

Station GHC Chicago, Illinois, Broadcasting

NOW, folks, here we are back at our microphone and, if you'll put on the old Baldwins and tune in sharp, you'll hear something. You have been listening to the gentleman from Pipwip, Pennsylvania, and realize now how it is, the old Dutch farmer stock in that state manage to pay off their mortgages. Yes, sir, they feed old tire-tubes to their hawks and get the highest-priced sausage casings in the world! Talk about *thrift* that never tires—that's *it*! Well, anyhow, now we are going to give our promised dissertation on that Seasonal Disease, *Marriage*, and the two subjects used to be somewhat akin—maybe they're still second cousins; they are not always on speaking terms either. Before I begin my talk, however, the String, Brass and Skin Orchestra, under the direction of Old Tut Tuba himself, will play, (1) "Last Night on the Old Back Porch," (2) "How Do They Get That Way?" and (3) "I'll Buy the Ring If You'll Pay the Rent." The last number is said, by the Press and Pulpit of Red Shank, Colo., from which thriving city the composer hails, to be one of the most practical poetical things yet manufactured. Let's go!

*(The celebrated Tuba Orchestra "goes"—My stars! how it DOES go!—for seventeen minutes, eleven seconds; and, the mentality of the listeners being anesthetized perfectly, the address of the evening is continued.)*

After listening to that honeyed harmony, my Friends, I am sure you'll understand how the old proverb, "Music hath charms to sooth the savage beast," originated. You'll also recall that "Here Comes the Bride" is particularly soothing and seductive. Lots of men would have run at the last moment, but that wonderful air kept them goose-stepping up the aisle. Quite a number of them have never stopped goose-stepping since.

But, let's begin at the very beginning and consider this "seasonal disease," Marriage, from a strictly scientific and, also, utilitarian standpoint. We are now in the month in which the greatest number of fatalities is reported. True, the disease is always present and rages sporadically throughout the entire civilized world, from 1 a. m. January 1st to 11:59 p. m. December 31st. Doubtless, someone succumbs even in the odd minute. But, in June, the poor preachers become exhausted. They posolutely are tied up in rings most of the time and, even in their sleep, snorously pronounce "Let no man put asunder"; leave *that* (they say *sotto voce*) to another woman. Or, perhaps, the Divorce-Court Judge is exempted? Anyhow, they know when they tie it that the knot is of the slip variety. It used to be a regular clove-hitch, but modern Science—wonderful thing, M. S.—demonstrated that this constricted the circulation and, so, the bow-knot was slipped over. Of course, the officiating minister *hopes* his bow'll stay tied, but (usually) is perfectly ready to try again if it doesn't.

Now, I would ask you—not only you who have trodden the long red carpet, but you who have decided just how you will stride, or glide, as the case may be, to the bar (rail, I mean) when the opportunity comes—if there is anything in this whole, round world more thrilling than the sight of Bride, Groom, Maids, Best Man, Bride's Ma, Groom's Ma (with *Pas en train*), entering the church to the strain of the Wedding March? (Note: The Rogue's March is *not* by Lohengrin and is in a different key entirely. It is not *usually* played at weddings). If you have, I say, seen anything more thrilling than this, it must have been the march *out*! Then, of course, the patients come arm in arm together and the



Mas and Pas and Maids and Flower Girls *et hoc genus omne* trail along in their wake. Not to it, of course: that is at the moment only a remote complication to be remembered. The groom usually wears a fatuous smile, trousers with a knife-blade crease, and the "last clean shirt." The bride, of course, wears a veil, a bob and shingle, and conceals artfully, somewhere in her trailing bouquet, a portable make-up set with which to renew, the moment she gains a moment's privacy, the ravages wrought by female pecks and the last general masculine kisses she is supposed to receive. What else she wears is, of course, not a matter to be broadcast; though, as a matter of fact, nowadays, there is very little to talk about.

That doesn't mean, however, that the personal apparel item in the domestic budget will be slim. The poor Benedict will soon find out that, the less they have on, the more it costs to cover 'em. Moreover, he is going to discover what Alice Annabelle really looks like when the marcel fails and the "bloom of Ninon" is rubbed off.

Marriage, the wise men have told us, is a revelation. It is. Also, they speak of it as a sacrifice. It is that, also. One sacrifices a whole lot. Sometimes even their veracity—right at the start. For instance, HE says "With all my worldly goods I thee endow" when, as a matter of fact, he fully intends to hold out at least a five-spot every pay day. SHE promises "To Love, Honor and OBEY." But, really, she means to "make George do it." Then, there are other passages relative to the reasons for the institution of the Estate of Matrimony, to which she listens and says "maybe" and he listens and says (very, very much to himself), "Not for this bird."

But, anyhow, they have gone safely through the acute stage and are now well started on the chronic course. And, how proud and happy they look as the slippers zizz around their ears and the rice sifts softly down their necks and into their ears! He has Her and She has Him—He has; She has.

The question a man on the fence might ask is, what are they going to do with each other, now they are safely in possession? Statistics falter at this point. It is kinder to draw the veil (not the Bride's, of course) and slip quietly away. He may recover and he may become just one of those hapless, hopeless things one sees on the L trains and cars, headed for the suburban deestricks with parcels under his arm, an extra nickel in his pocket and a wonder in his heart as to whether

the butcher has stopped the meat, as he threatened to. It's awful to have a steak appetite and know that you're quite likely to get only cod-fish balls. It's more awful to think how many pairs of silk stockings a young, healthy woman can wear out and how gol-darned stubborn they can be about permanent waves—especially when the rent is due. Ask this gentleman in a low, confidential tone why he got married, and he'll tell you, "I'm darned if I know." Ask him if he'd do it again and, nine chances out of ten, he'll perk right up and say, "Just give me the chance." He doesn't enter into further explanation and, therefore, one must assume that, despite his prolonged sufferings, he is resigned—aye, more than that, is prepared to revel in his martyrdom!

It is a peculiar fact that people about to be or being married are objects of great interest to the neighbors. After the thing is over, the young couple becomes just "people" and their doings are only noted surreptitiously by the women-who-watch (they are in every block and in every burg), and the landlord and tradesmen. You see, there is a glamor, a mystery, about *getting* married; there is also a whole lot of mystery—but not so much glamor—about "staying put." Even mystery (especially of the unveiled variety) may pall after awhile. Especially if the once twain and now one live in an ultracivilized community on a modern uncivilized salary. Into such lives, many leaves must fall—and mighty few berries.

Nevertheless, Marriage is a "glad estate." Often, the only visible estate the patients possess. It has, moreover, its compensations. One bathrobe can be made to do for two people and, when you're safely tied and have a place of your own, you don't have to take off your shoes in the cold front hall and sneak up to bed like a burglar, at 1 a. m. or later. Not always—sometimes they do even that. That, of course, is presumptive evidence that marriage, in that particular case, has not been as completely successful as might be wished.

Marriage makes for forbearance; sometimes it makes two bears out of a pair of hitherto perfectly nice people. It is said to have "a softening influence." I have seen some married people who were soft enough to sit on. But, again, there are notoriously hard citizens wearing darned socks.

And this brings me to a most interesting phase of married life as it is lived by some. I refer to the pet poodle. You may not, off-hand, see what pooches and matrimony have in common, but there is some strange bond.

You must all have seen lovely young women who had about as much use for our canine friends as they had for white mice. Then—ultimately—they got married and, a year or two later, began to go around carrying a Mexican hairless or a Chow. Upon the damp noses of these quadrupeds, they bestowed ardent little kisses. They combed their wool (if they were woolly) or scratched their tummies if they had no "hair on the place that hair ought to grow," and generally made a fuss over "mumsie's darling itty doggie." Doggie-ums slumbered in mumsie's arms and hubby got up to bring it its milk (warmed!) in the cold morning hours.

Later, he was trusted far enough to be allowed to take doggums out on a chain. If that isn't a perfect illustration of the Fall of Man, I want to know what is. To see someone's legal (male) husband ambulating down the street (with frequent halts) attached to the proximal end of a chain with a small shivering pooch at the distal extremity, is a sight to make even a saltwater sailor sob. And, when *they* sob, it's serious! Nothing but marriage could do *that*—or paresis. Moreover, *why* should even a paretic perambulate his wife's poodle unless, indeed, even the last spark of hope had fled? And why should a regular wife want the blamed thing, unless hope also had fled from her bosom forever and ever more. Oh dog-gone it, here I am getting pathetic.

The question arises: Is the poodle a visible, tangible evidence that marriage (in his house at least) is a failure? Or must we regard him as the saving clause?—a something fulfilling the ideals the woman had built round a

mere man, only to be cruelly disillusioned? If so, what ideals she must have had and what a man it would have taken to come up to them! One fancies that, in these days, there are more poodles, and such, than perambulators. This gives us a clue. The maternal instinct must be satisfied somehow and the shivering ki-yi is a compromise.

Soon, perhaps, "Love me, walk my dog" will be a part of the marriage contract. When (if) it is, a lot of big brutes will refuse to sign on the dotted line. The majority of men were always selfish creatures; to describe the other variety, omit the above adjective—and insert some other which suits your fancy.

It might be set down here as demonstrated that the papa-poodle-partnership prank is punk!

A dog chain is not the kind of "tie that binds" blessedly. It blisters. I'll curtail this part of the discussion and proceed to prove to you that marriage is a necessity. If there were no marriages, there would be no hope chests. If there were no hope chests, there would be no showers. If there were no showers, there would be no bridal wreaths. If there were no bridal wreaths, there would be no brides. If there were no brides, there would be no babies, and so—. Well, scientifically speaking, it is evident that we must have this Seasonal Disorder, in order that we may continue to exist and hand on the laugh to posterity. If that isn't obvious, I've been talking for nothing.

Next time, I'll endeavor to tell you something about the end of the rainbow—Divorce. Good night, Folks, and may you snigger in your sleep.

*ALL knowledge is lost which ends in the knowing,  
for every truth we know is a candle given us to  
work by. Gain all the knowledge you can and then  
use it for the highest purpose.*

*John Ruskin.*

# Let's Talk it Over

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## Dr. Bryce's Talks

### When a Doctor Loses Hope

I HAD not been practicing medicine more than a year or two, when I was called to see a doctor twenty-five years my senior, who did a suburban or country practice adjacent to my home town. I found him with a broken leg—transverse fracture of tibia and lower end of fibula—from his horse falling with him while returning from a night visit over a dark and slippery road. From his reputation among the patrons of the country store, I thought it possible that the horse was not the only unsteady one when the accident occurred, for the poor brother said, he was in much pain and had a "hell of a headache."

I asked him if he had struck his head as the horse fell; and he said he might have done so, but he showed no signs of any injury. So I uncrumpled his leg and began to straighten things out, overcoming muscular contraction by steady countertraction on his foot. While holding his leg and awaiting gradual relaxation of the rigid muscles, I had quite a little memory picture of this physician over the best thirty years of his life. It was a coincidence that we two should have met under such circumstances, and it was pathetic. Before the war between the States, he graduated in medicine from the old "Jeff" school in Philadelphia and, returning to his Virginia home, commenced practice under most favorable auspices. His father was a rich and influential man and he had two sisters, very beautiful, refined and accomplished leaders in society. They lived on a large estate with beautiful grounds and lovely surroundings and near enough to the Old Dominion's capital city for their aristocratic and wealthy friends to be frequent guests at their elegant and hospitable home. I was a youngster then and my parents' farm adjoined theirs; also, I was very fond of them all and would go over to see them once or twice a week. I was too young to be a "courting man"; but, of course, didn't know it and fell desperately in love with Miss "Moke," whose

name was Edmonia and who exceeded my thirteen years by at least a dozen more. But she was a royal good sweetheart who received me as the greatest gallant, wore the flowers I brought her, taught me how to dance and, at her parties and balls, always gave me preference in selecting her partners. She was a fine woman and, when I learned from her own lips that she was soon to be married, she told me in such a feeling manner that she was too old for me *to marry*, but that she was going to give her niece to me who was "mighty pretty and just my age," that I didn't have the heart to tell her what I thought of her at the time! Poor soul; she married for love, but unwisely, forgetting that a woman assumes a big burden when she marries a man beneath her, socially, and attempts to lift him to her level. It cannot be done. She died in a year or two after her marriage, and I fear that disappointment and mortification had much to do with her death.

The other sister married a colonel in the Confederate army—a medical man—but she died in childbirth a year after. The war swept away everything they had; negroes, of course, and all property of every kind, and the fine old mansion and grounds were utterly destroyed by shot, shell and fire, as it was the center of a fierce battle between the cavalry forces of both armies.

It did not take long for this memory panorama to unfold before me while I stood by this unfortunate man who was fighting an unequal battle with poverty—something he had never known until stunned with the fact that the South had lost its fight, and when only real men could face the clouds and come back. Years before, he had been my doctor and my ideal, and now I was ministering to him, a wreck, as doctor and friend.

"Well, you are going to put that leg in a fracture box and keep me lying here for six weeks, I suppose."

"No, I'm going to fix you up in plaster."

"Umph, umph, something new," he said.

After he was comfortably fixed and informed that he could use his crutches and get about a little, he was greatly pleased and, calling me by my given name he said: "Son, I always said you would be a credit to the profession—this plaster wrinkle is one on me."

"It's on you now, anyway," I told him.

I have never been able to understand how so many people maintain confidence in intemperate doctors and how they make allowances for them and employ them. But, such is the case and such was the case in this instance. The people apparently loved him, looked out for him when he couldn't navigate safely, and waited for him to sober up before they would call another physician when taken ill. They did everything but pay his bills promptly. And, as he practiced by the sufferance of the people, he took what *they gave him* oftener than what *he demanded* in a business-like way. I felt bad about this poor physician's predicament, for a country doctor with a broken leg and no money cannot be very happy; and I doubted his having as much as a ten-dollar bill in his pockets. As I was going out to my buggy, a negro boy, who took care of his horse and helped about the house, asked me if it would be long before the doctor could get out? I told him, about a month or six weeks before he could get back to his practice.

"I dinno what we gwine do," he said.

"What's the matter?"

"Dey ain't no feed here for de horse nor de cow."

"Won't the storekeeper send you what you need?"

"Not widout de money," he said.

I went back and had a confidential talk with the doctor—a talk in which he became the confessing prodigal: "Here I am growing old, a slave to these ungrateful people who have taken advantage of my one weakness and used me day and night, knowing that I am dependent upon what they give me, and afraid of losing their patronage by collecting my bills in full, and now I am down and without money or credit. It isn't that I am a drunkard, but I have not faced my great losses by the war like a man. A wealthy man doesn't get suddenly used to poverty, and I have braced up with whisky instead of real courage. I haven't five dollars in the world."

"How about your patients? Who will attend them now?"

"That d—n self-righteous T. who stayed at home with the women and children and picked

up a practice while I rode with the Fourth Virginia Cavalry and lost practice, home, and all I owned on earth—damn him!"

"I am going by the grocery store and order some horse and cow feed sent to you. How do you and he stand?"

"I don't know. I owe him and he owes me and I usually 'lump' his bill."

"What do you mean by 'lumping' his bill?" I asked.

"Well, there is much I do not count. I just cut it about half—he is pretty good to me, you see."

"Does he ever 'lump' your bills?"

"No, but he don't push me," he said.

"In other words, you are nervous about asking this man to pay you the face value of your bill for honest and valuable service rendered him, because he has let you drink his common whisky at his own price; and this very morning has refused you credit for a bale of hay for your unfed and faithful horse!"

He asked me to look in his coat pocket and give him a letter, which he had not opened. After reading it, he handed it to me without comment. I found that it was an itemized bill from his old Dutch rum-selling grocer amounting to about forty dollars with a statement, "No more credit until this account is settled."

I told him, it was time to commence a reform and asked him to allow me to straighten up a few of his accounts. His wife very earnestly seconded the proposition and came forward with his ledger. We found the account against this old rum-seller, and asked the doctor when he had last given him a receipt, and he said over three years past. Going back less than two years, we found over eighty dollars owing the doctor at regular, recognized rates by this old Shylock, and made his bill out accordingly.

"Do you want me to 'lump' this bill?" I asked.

"Pretty steep, isn't it?" he asked.

"No, only what he owes you, even eighty dollars which pays your bill and leaves him owing you forty."

"Don't you think we had better shave it a little?" he asked nervously.

This poor doctor was just like many others I have known—just lacked courage to demand his own. He had never acquired the habit of seeing a business side in his profession, and a consciousness of not having always been in the proper condition to do his best when called upon rendered him unable to do himself justice when asking for his fees. With

the consent of his wife and at her suggestion, I made off several other perfectly good accounts against others living on my way back to town and put them in my pocket. Receiving his promise that he would not take another drink of whisky unless I thought it necessary, and that under no circumstances would he make any rebate on any of the bills I held, I left with a promise to send him what supplies he needed and see him the next day.

My first call was at Mr. Schneider's store. He did not know me and, when I told him that I had an order for him from Dr. G. for some supplies, he said: "I haf to haf de monie to send dees."

"Doesn't he run an account here?"

"Yah, but he don't run him any more unteel dees pill is baid," he said.

"Don't you owe him something?"

"No, no, not a tam cent."

I pulled out the bills and told him that he claimed that the doctor owed him forty dollars and I had the doctor's bill against him for eighty, and advised him to hurry the doctor's order over to him. He fairly frothed at the mouth he was so mad and swore he "would not hurry nuddings."

"If you don't send that stuff, I'll warrant you at once and make you pay some other grocer for it," I told him.

"Who ish you anyvays?"

"I am his doctor."

"Vell I tink I send heem de stuff."

"No, you receipt your bill and give me forty dollars and I'll receipt his against you and you will both be even," I told him.

To my surprise, the recently irate Dutchman slipped behind his counter and handed me forty dollars and a receipted bill to date against Dr. G. I receipted the doctor's bill and handed it to him, thanking him and asking him what about the order. "I send it to heem—dere is nuttings short apout me—Doctor, haf some cool shinger ale." I joined him and we parted in friendship, and the best of it was, he stood by the doctor as a friend should and had him as his physician afterwards. His accident proved a blessing in more ways than one.

### Fought His Way Into Practice

I had another old medical friend who braced up somewhat differently. I do not mean that he was a drinking man, but that he fell into a condition of resignation to what seemed the inevitable. Like the case above related, he had been a man of means before the Civil War and was independent of practice. But, when Uncle Sam freed his "niggers," he

had to go to work. So, he concluded that the practice of medicine in a city would be easier than following a plow. Accordingly, he brought his growing family to the city and opened an office. He must have been an optimist to have thought that he could pick up a living from the start without money and among entire strangers, but he had a sunny disposition, a kind heart, and was without personal fear of anything that ever trod the earth.

It happened that he located in the neighborhood of a Doctor C., who had the reputation of being "a bad man to fool with" and not very particular as to the way other doctors' patients changed from them to him. It was just after the close of the Civil War and everybody was busy trying to keep the wolf from the door. As doctors were no exception to the rule, some of them were more grasping than others. Our friend from the country began to pick up a little practice around him and, as he was a new-comer, he was evidently getting some that otherwise would have gone to Dr. C. who thought it about time to silence the old man. He started about it rather clumsily by paying a *friendly visit* to one of the doctor's patients and advising him to "be careful how he took medicine from doctors who did not understand his constitution." Dr. B—t was an older man than his fellow by ten or fifteen years and did not present the appearance of an athlete or pugilist; but, in his college days, he was the best wrestler and boxer in his class; and, where he was known, he had the championship for the best rough-roll-and-tumbler in his county. When he had come to the city and put on his silk hat and Prince Albert, they covered the hide of a man whose muscles were as quick as a cat's and as hard as steel.

The neighborhood drug store was a great meeting place in those days for customers and loafers. It was a very large store with ten or twelve feet between the counters and thirty feet from the front to the prescription case at the back part. On this particular morning, Dr. B—t was chatting pleasantly with the proprietor, when Dr. C. drove up and walked in. It seems that these two physicians had never met, and the druggist halted him and introduced him to Dr. B—t. The meeting was a little stiff, and the "bad man," instead of saying "How do you do, *Doctor?*" made a very formal nod and said: "How do you do, *SIR?*" Our game old friend said: "I am much fatigued from paying *friendly visits.*"

"What do you mean?" asked the bully.



Shaking his finger at him, Dr. B—t. said: "You know what I mean, you skunk."

Dr. C. had his opening and sailed in, making a vicious pass at the doctor's chin. Dr. B—t. lightly side-stepped and shot him one behind his left ear as he passed landing him sprawling before a lot of customers and neighborhood loafers. As the astonished man was getting on his feet, our old friend took off his silk hat and coat, laid them on the counter and awaited the offensive. The infuriated man lost his head and failed to land his terrific punch, but Dr. B—t. landed his right full in his face blackening his eye, starting his nose to flooding and landed him flat on his back again.

The crowd was in full sympathy with our old country friend and was inwardly delighted at his ability to punish the bad man of Church Hill.

The wounded doctor got up groggily, but our old friend was in earnest, for he said: "I hate to hit you again, but I shall practice on you until you are cured—have you got enough?"

"Yes."

"Well, say so, so that everybody can hear you," said Dr. B—t., as he drew back as if to smash him again.

"Enough! Enough!" sang out the thoroughly whipped braggart.

The old doctor hadn't gotten over that, "How do you do, SIR?" He had whipped his man, but that "SIR" still had him hot in the collar, and turning to the thoroughly humbled Cock of the Walk said:

"If you were introduced to me again, what would you say?"

"How do you do, DOCTOR?" was the prompt answer.

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This is awful stuff to put in a medical journal, but it teaches a lesson. There are times in the life of every man when it becomes necessary for him to demonstrate the possession of high moral and physical courage if he expects to enjoy the respect of the community or his own self respect. These cases are unfortunate, but inevitable. And it takes very high *moral* courage to make a man exhibit *physical* courage when he is certain that he is going to be severely punished by a superior physical antagonist. In the case of our Dr. B—t., he realized that he could not remain in that neighborhood and permit himself to be browbeaten by this bully of a doctor, and he determined to show him that he was not *afraid* of him, even if he could

not whip him. But, fortunately, he was the better man, and immediately began to get the best patronage in his part of the town, while Dr. C. drifted out to a mining town in West Virginia, got to doing abortions and finally landed in the penitentiary.

C. A. BRYCE.

516 N. 10th St., Richmond, Va.

### THAT CASE OF "NEURASTHENIA"

[Some months ago (Surgical Seminar, in March issue, page 185, Problem No. 15), a lengthy and complicated history was presented, concerning a California physician, which should be read again. We have before us a discussion of this problem which appeals to us, and we present it for further consideration.]

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Here is a patient with very decided symptoms of pathology in the right iliac fossa. These symptoms, according to the history, extended over a long period of years (since 1905) and, yet, during the period he was under your observation, his appearance did not suggest that of a very sick man. In view of the very positive neurasthenia, there may be an unintentional exaggeration of these digestive and urinary symptoms. The undergoing an abdominal operation does tend to produce such a mental complex (don't you think?), even in a layman. However, neurasthenia is not a diagnosis, and men of his type are not so commonly subjected to either neurasthenia or chronic colitis. Before his appendicitis operation, he was probably a good eater and had what we may call a robust digestive system. I judge this from his good bodily development. I would also discount his diagnosis of adhesions, for the reasons, first, that every competent surgeon who saw him could not convince himself that adhesions sufficiently accounted for his distress, and, secondly, there was not a definite onset following either operation. The effects of adhesions usually diminish in time, while in this case the symptoms appear to be progressive, and we would expect more decided constipation if adhesions alone accounted for the trouble.

I think, we have in this case an almost complete picture of a chronic hepatitis and cholecystitis. There are numerous cases where the more localizing symptoms of cholecystitis, such as pain and tenderness, attacks of chills and fever, and jaundice, are absent.

Of course, in the absence of these, it is difficult to make a positive diagnosis; but, in this

case, the long period of treatment has pretty well served to eliminate the other conditions that could produce these symptoms, the flatulency, hyperacidity indicated by the empty feeling in the mornings, mental depression, the secondary infection in the sacroiliac synchondrosis. Take these symptoms along with age, build, occupation of the patient, a history of appendicitis and the fact that a prolonged régime of gastrointestinal treatment has given no relief, and all you need to complete it is a history of "bilious" attacks.

I have seen so many cases of indefinite digestive disturbances running along, sometimes for years, before an attack of gall-stone colic finally revealed the source of irritation and toxemia, that I feel inclined to condemn the biliary tract on suspicion, whenever a rigid system of diet and intestinal drainage fails to give relief. I do not mean to utterly rule out adhesions or enteroptosis in this, but I would give a thought to the biliary tract.

My treatment would be an exploratory operation through the upper right rectus, also looking for depressing psychic influence in the patient's affairs, both domestic and financial.

Note these attacks coming on in 1914, "after a rich dinner," thus confirming my statement about his being a good eater and also a characteristic of biliary infection. This was nine years after operation—too long for adhesions.

G. J. WARNSHUIS.

Forman, N. D.

#### ACTIVE AND ENERGETIC TREATMENT OF "NEURASTHENIA"

[In the Surgical Seminar (this Journal, March issue, p. 185) Surgical Problem No. 15, dealt with the pathologic history of a California physician whose health had been more than bad since 1905, when he was operated on for appendicitis. This history was quite lengthy and involved. It contained a tale of woe that could not but touch us deeply, not only because it depicted graphically the misery that a patient may undergo in his search for health, when diagnostic investigations are contradictory and especially when the nature of the ailment is attributed largely to that easy grab-bag of diagnosis: "Neurasthenia."

In our opinion, our California colleague is not only mentally and psychically ill, but physically so, and to a serious extent. This opinion is fortunately shared by a good many correspondents who have discussed Surgical Problem No. 15. Among the various con-

tributions that came to our desk, there is one by Dr. A. I. Arneson, in Austin, Minn., which outlines in great detail a course of physiotherapeutic measures to which the patient should subject himself. Doctor Arneson's treatment appeals to us as promising. We want to submit it to the critical study of our readers and we should like to receive expressions of opinions concerning it. Doctor Arneson's letter is as follows:]

This much operated and examined patient may need further surgical work done at some later date but, just now, he needs constructive measures and needs them badly. Let the adhesions alone for a while and get rid of the smoldering fires, so that, when another operation is performed, the patient will have the tissue vitality and recuperative powers to heal properly. Get rid of the proctitis, sigmoiditis, colitis, which may be considered the basic condition, upon which all the symptom variations have developed. Then you will be rid of the inflammatory reactions themselves and you will be rid of the enormous amounts of toxins being produced in the colon.

The inflammatory reactions and the toxins easily explain the associated inflammations in the sacroiliac region, the sciatic-itis symptoms, the neurasthenic symptoms of toxic (not, fatigue) origin, and the general irritability and low functionability of the sympathetic nervous system. Drugs and diet have been tried and failed: the reason may be obvious. Something definite and exact must be used in this case. We have in our various physiotherapeutic measures, weapons of precision with which to attack this underlying condition and many of the associated conditions. We can correct the inflammatory reactions and the toxins, but, after that is done, there will probably be mechanical conditions that will have to be relieved by surgical means in order that the patient may stand a fair chance of remaining well.

Now, as to treatment. There is hard work to be done and nothing but hard work will do any good. First of all, it will be necessary to cleanse the colon of inflammatory products, mucus, etc., and of all putrefactive food products. This had best be done by means of very hot enemas of chloromangan solution (hydrochloric acid and potassium permanganate) taken in knee-chest position or hanging head-first over the edge of the bed. This should be taken each morning. Efforts should be made to include the paralyzed cecum in the sewer flushing operation, as it needs it badly.

An hour or so after this flushing, the patient should receive sedative diathermy treatments, using a 3x6 block-tin electrode applied to the region of the sacroiliac synchondrosis and extending across the lumbosacral articulation over to the opposite side. Use a 6x8-inch electrode on lower abdomen. Give sedative diathermy by exactly the correct technic. Follow this with general systemic radiation of entire body with high-power radiant light and give first-degree erythema-dose of ultraviolet rays over the entire body.

In the evening, two hours or so before retiring, give him sedative diathermy, using a suitable electrode introduced into rectum and a 2x4-inch kidney-shaped electrode over the symphysis pubis.

The foregoing measures should be administered daily at first, later on increasing the intervals as the progress of the case may indicate. The sedative diathermy will affect favorably the "itis" in the sacroiliac region and the prostate. It will also have beneficial effect on the proctitis and colitis, affecting the segments of colon lying in the pelvis. The general radiation with visible light and the ultraviolet rays will increase the vital qualities of the blood stream, increasing the oxygen-carrying capacity and the ability of the blood to pick up the mineral salts, such as calcium, from the proper diet given the patient. It will also affect favorably the general colitis, proctitis, etc., by this indirect route.

Given the sedative effect, the increased active circulation through the parts involved and a more vital blood stream going through these parts, we are working along Nature's plan and, if **there is any chance whatsoever** to help this man, I believe that this plan will do it. After a week or so of gentle work along these lines, I should want to give him treatments with the static wave to the rectal electrode for the stimulation of contractile powers of the musculature of the colon and prostate, also for the purpose of expressing from these inflamed tissues the products of the inflammation. The diathermy softens up the inflammatory deposits and the blood stream carries it away if given time, but we have in the static wave an agency by which this process may be greatly speeded up.

This treatment must be given cautiously and not repeated too often, at first, until the patient's tolerance is established. I would also consider using the static bipolar treatment, with one electrode over the cecum and the other on the lumbar muscles on the same side. This would be given for the purpose of bring-

ing life back to the contractile muscles of the cecum and ascending colon. This treatment also must be given very gently, cautiously, and for very short periods of time, at first.

It may be expected that it will require considerable time to accomplish what we hope to do with this line of therapy, but there is every reason to believe that the results will be satisfactory. Later on, there will come a time when the patient will have to decide whether or not there is indication and need for surgical interference with possible and probable adhesions throughout the pelvic viscera, the cecum, sigmoid, etc., but, under this present condition, this is not the time for that procedure.

A. I. ARNESON.

Austin, Minn.

### NOTICE!

#### I Expect a Prompt Settlement of All Accounts Due Me

If not possible to settle in cash, any of the following named articles will be acceptable, viz:

Cotton Seed, Chickens, Ducks, Geese, Turkeys, Billy Goats, Live Cat Fish over 1 lb. each, Bull Dogs, Registered Bird Dogs, Live Wild Cats, Poland China Hogs, Skunk Hides (dry), Deer Hides, Shot Guns, Cedar Posts, Watches, Gold Teeth, Diamonds, Cream Checks, Pine Trees (2 ft. in diameter x 30 ft. long), Automobiles new or second hand, Peanuts, Black Eyed Peas, Liberty Bonds, Land Notes, Bacon, Lard, Country Hams, Clean Goose Feathers, Soft Shell Turtles over 5 lbs. each. Anything that can be sold for cash legally.

I need the money.

Respectfully,

Texas.

M. D.

[How's that for a gentle dun? It surely ought to bring the money or money's value. The doctor who sends out these notices evidently has been done up brown and has become desperate. Hope he will get all that is coming to him.—Ed.]

### MOSQUITO-EXTERMINATION

In reference to the article on fever mosquitoes and dengue or "breakbone" fever, page 220 of the April issue of the CLINIC, I wish to call attention to the mosquito fish, or top minnow. This fish, the *Gambusia Affinis*, Baird and Girard, feeds almost entirely on the eggs

and young of the insects in question. Six hundred were introduced into California by the State Board of Health, in April, 1922, and they have now increased to over twelve million. The State Board of Health now maintains sixteen hatcheries for these fishes and is doing most effective work in connection with mosquito abatement. This fish is a native of the Eastern and Southern states.

Since Louisiana will take care of all the lepra patients in the United States (at Carville, La.), would it not be a good idea for all the State Boards to help the Gulf states exterminate the yellow-fever mosquitoes with the fishes above mentioned?

L. M. YOUNG.

San Francisco, Calif.

#### **MEDICAL INTELLIGENCE BUREAU FOR THE HOT SPRINGS NA- TIONAL PARK OF ARKANSAS**

Under the auspices of the Garland County Medical Society of Hot Springs, a Medical Intelligence Bureau has been organized for the purpose of placing before the medical profession of America a clearer and more exact knowledge of the therapeutic values of the waters of the Hot Springs National Park of Arkansas, in the treatment of diseases and conditions resulting from acquired or constitutional toxemias, faulty metabolism and defective elimination. Colonel L. M. Maus, retired, Medical Corps, United States Army, has been appointed Intelligence Officer and placed in charge of the bureau.

An advisory committee, consisting of three members of the local medical society, also members of the American Medical Association, has been appointed to cooperate with the intelligence officer in the management of the bureau. Clinical and other professional information relative to the uses of the waters of the springs in the treatment of diseases will be conveyed to the medical profession of the country through addresses before medical societies and conventions, contributions to medical journals, and the distribution of appropriate medical literature on the subject. Members of the profession are cordially invited to correspond with the bureau relative to cases which have not responded to treatment at home, and to the advisability of sending them to Hot Springs for a course of treatment.

Although Hot Springs is owned and controlled by the United States Government and has been used, with increasing popularity, for

more than a hundred years, it is believed that there is a general lack of knowledge throughout the medical fraternity of the country, regarding the healing and beneficial powers of the waters.

Recognizing the beneficial results of Hot Springs in the treatment of chronic rheumatism, arthritis and the various forms of chronic neuritis, more than forty years ago, the Government constructed the Army & Navy General Hospital here, where thousands of officers, enlisted men and veterans of the several wars have been successfully treated. Several years ago, the Interior Department, at a cost of several hundred thousand dollars, constructed a public bath house for the poor of the country, where large numbers during all seasons of the year are treated gratuitously regardless of race, color or sex, by medical officers detailed from the Public Health Service.

In a circular letter, published under an Executive Order as early as August, 1892, the Surgeon General of the Army informed medical officers that the waters of Hot Springs, Arkansas, had established a reputation in the treatment of certain diseases, and recommended that patients suffering from the following diseases and conditions be sent there for treatment: namely, the various forms of gout and rheumatism after the acute inflammatory stage, neuralgia, especially when depending upon gout, rheumatism, metallic or malarial poisoning, paralysis not of central origin, the earlier stages of locomotor ataxia, functional diseases of the liver, chronic skin diseases, especially the squamous varieties, chronic conditions due to malarial poisoning, infective arthritis, arteriosclerosis, chronic nephritis, and other cardiorenal diseases, selected diseases of metabolism (gout, diabetes, obesity, etc.), chronic gastrointestinal diseases which have not responded to continued hospitalization at other places (gastro-neurosis, postdysenteric colitis, chronic intestinal stasis, etc.). Clinical experience among the practitioners of Hot Springs has proven that these waters taken internally and employed in the form of baths have been very effective in the reduction of high blood pressure.

Every facility has been provided at Hot Springs for the care and treatment of the sick in the way of bath houses, hospitals, sanatoria, hotels and boarding houses. Among the twenty or more bath houses, are a number costing from one to three hundred thousand dollars each, and which contain the most modern equipment for the different phases of

hydrotherapeutic treatment. The climatic conditions are excellent and favorable at all seasons of the year for taking the baths, and are especially so during the warm weather at which season skin elimination is more active.

Hot Springs is provided with an efficient medical staff, which measures up favorably with the profession throughout the country. They are not only required to pass a local federal medical board but the state board of medical examiners before being allowed to practice and to prescribe the baths. The physicians, as well as the bath houses, are under the control of United States authority through the Park Superintendent, who is an officer of the Public Health Service. Sanitary inspections of the bath houses are made daily and the latter are kept in excellent condition.

The Hot Springs of Arkansas were set aside by Congress in 1832 as a "National Sanatorium for all time and dedicated to the people of the United States, to be free forever from sale or alienation." Frequent physiological and chemical examinations have been made of these waters by government experts, and at the present time the Secretary of the Interior has asked another appropriation for that purpose. Professor Boltwood, in 1904, declared that the waters of Hot Springs, Arkansas, were strongly radio-active and, in 1913, Professors Hunt and Franklin of the National Research Council reported them, with few exceptions, to be as strongly radio-active as any European springs. When the true therapeutic values of these waters become known to the medical profession of America, and the many erroneous and prejudicial opinions of a generation ago are swept away, the Hot Springs National Park of Arkansas will become celebrated as the world's greatest health resort, and prove inestimable in the cure and relief of suffering humanity.

L. M. MAUS,  
Intelligence Officer.

Hot Springs, Arkansas.

### QUACK DOCTORS BY THE THOUSANDS

In a recent number of *The Literary Digest*, there was a symposium of the views of a large number of newspapers on the subject of the obtaining of fake medical diplomas, brought to light by a newspaper reporter who purchased one.

About every so often, some one starts a new school for teaching some peculiar method of treatment of the sick. Most frequently, the

originators know no more about the human body or the changes that take place in it in diseased conditions than do the ones who obtained, by fraud, the medical diplomas and state certificates. The preliminary requirements in such schools are no more than those possessed by the persons who procured high-school diplomas by fraud, and probably not as great; for, it is a notorious fact that schools originated for pecuniary gain will take any students who can understand the English language. While the preliminary requirements are not great, they are probably sufficient to enable the student to grasp the type of instruction given, and, if not, it is quite immaterial to the school, so long as it gets the money out of the student. Men are being turned out of these institutions by the thousands, every bit as incompetent to determine the diseased conditions of patients as the recipients of the fraudulent diplomas, and their treatments of their patients are in many instances equally as disastrous. Yet, nothing much is said about that.

If the standards that apply to the practice of medicine were made to apply to every one who attempts to practice any manner of treatment or healing whatsoever, so that, in order to be permitted to do so, he must have two years in college, four years in medical school, or its absolute equivalent in the teaching of the fundamental branches of medicine, in whatever school he may go to, and one year in a hospital—then these criticisms against diploma mills would be much more appreciated by physicians.

Why, when these absurd organizations are being permitted to run wild, when they are flourishing with no regulation or with regulations of such a character as to exclude no one, in some states being allowed to practice by vote of the people, why should physicians exert themselves to protect the public against any kind of fraud along that line?

Through their organizations, physicians have always endeavored to protect the people against frauds. These organizations have been accused of constituting a monopoly. The accusations being raised mostly by those who wish to treat the sick after short-cut preparation or by reason of a theory not in consonance with prevailing medical thought, and which would very naturally and rightfully be rejected by medical men as scientifically unsound and dangerous for the public. So, these various absurd innovations, invariably originated for personal gain, have come out in the form of new systems, claiming to be not amen-



able to existing laws, and thus rendered futile the efforts of physicians to protect the public.

The estimate of the *New York World*, of 15,000 to 25,000 practitioners having been turned out by diploma mills, probably falls short more than half the number graduated by schools of the class referred to and, in all probability, the fake graduates are doing no more harm nor any more good than is done by the followers of new-system schools.

The statement of the *New York World*, that "There are few more despicable crimes than that of letting loose a lot of ignorant and unscrupulous persons to prey upon the lives and pocketbooks of the American people," should not be exclusively applied to fake medical institutions. There is very little difference as regards safety for the public between allowing the graduates from the new-system schools to practice and doing the same with respect to holders of fraudulent diplomas.

G. M. RUSSELL.

Billings, Mont.

### AUTOHEMIC THERAPY

Without doubt, we have, in autohemic therapy, the best constitutional remedy obtainable. No matter how the patient may be afflicted, nature has provided that, within his own blood, he has the substance that makes the remedy for his ailment. The constitutional remedy gets at the root of disease, promotes harmony in the economy and brings about the cure of our patient. It is a waste of time to attempt the cure of a chronic case by any other means than the administration of a constitutional remedy.

The constitutional effect of autohemic treatment is manifest by improvement in nearly every organ and tissue of the body. I have treated patients for some recent trouble that was causing them great discomfort and have seen defective vision or defective hearing, that had existed for years, become greatly improved within a short time. One patient whom I treated for hayfever was cured of an ulcer of which she had not told me until she was well of both. Another case that was under treatment for a partial paralysis of the hand was cured of an eczematous patch that had existed for more than twenty-five years. Still another patient was relieved of an almost constant spasm of the chest and neck muscles, with which she had been afflicted for more than fifteen years, while taking treatment for a general run-down condition brought on through an attack of influenza a few months

prior to coming for treatment.

I have seen many other similar instances evidencing the constitutional effect of autohemic therapy.

Frequently we hear the expression, "Isn't it strange that they can use the same remedy for so many different ailments!" However, when it is explained that no two persons' blood is the same, that there are as many different characters of blood as there are individuals, and therefore, it would be impossible to make the same vaccine for each patient, one is able to see that the remedy given to one patient is widely different from that given to another.

F. N. FOLSOM.

Santa Rosa, Cal.

[The last word on the subject of autohemic therapy has by no means been spoken. In fact, one might say that, so far, we have heard only preliminary remarks. It is very true that some surprising effects have been observed from this method of treatment, and it is to be hoped that it will be developed along scientific lines in such a manner that it will become practicable and practical and that its possibilities, as well as its limitations, will be determined.—ED.]

### AN EMERGENCY CASE

Case: Woman 39 years old—farmer's wife, quite hard worker. No history or symptoms of heart insufficiency. Saturday night, at neighbor's, ate dried-beef sandwiches and pickles. Was quite tired at the time. Taken sick in the night; pains in stomach with sour vomiting. Following (or same) morning, husband came to office for medicine, saying wife had similar attack of pain, indigestion, etc., as the one she had 1½ years ago, at which time I emptied the stomach and bowels and gave antacids with capsicum and paregoric and secured favorable results. But, patient was several days regaining strength and appetite. At that time she had been working hard cleaning house and had eaten while very tired.

There were no heart symptoms. In fact, I never had examined the heart as there never seemed any indication for it. This last time, I sent antacid and antigas medicine with intestinal antiseptics, with instructions to have her drink hot normal salt solution to capacity for the purpose of emptying stomach.

At 8:00 p. m. call to go to see patient, as vomiting and pain had not been relieved. Gave enema with good results (some gas) and she said that pain was relieved. No fever. Pulse

good, but somewhat relaxed. Left medicine for nausea and vomiting and returned home about 9:15 p. m. Next morning husband came in saying pain and vomiting had started soon after I left and continued at  $\frac{1}{4}$  to  $\frac{1}{2}$  hour intervals all night. Sent more medicine with instructions to call me at noon if not relieved. Called at noon, no relief. I went out at 1 p. m. No fever. Had vomited two large pieces of pickle. Bowels had moved twice during a. m. Pain started to left of abdomen above navel and moved to right at 10 to 15 minute intervals. No distention or special soreness or tenderness, little or no gas. Nausea and vomiting continued. Patient quite restless. Gave chlorodyne tablets, also capsicum with carminative and paregoric and, finally, gave two tablets of hyoscine-morphine-cactoid (modified), repeating the dose in  $\frac{1}{2}$  hour.

At about 2:30, patient called for more air and sat up in bed and, upon feeling for the pulse, I was surprised to find it very rapid and feeble. Could not count it. Nausea and vomiting ceased and so did the pain, largely. Gave full doses of digitalis, also an improved Da-Costa pill (heavy doses) and repeated half hourly. No improvement in pulse. At 7 p. m., I gave digipoten with glonoin, also strong coffee; but nothing influenced the heart action. At 8:30, the patient was dead. Might add that she was menstruating when taken sick.

Was it a case of myocarditis only (as it seemed to me; in addition to indigestion)? Will admit, I did not know much about the heart as I had never examined it. There had been no symptoms and no indication for looking to heart before and did not have stethoscope along, which would have made no difference so far as saving her was concerned as nothing produced the slightest effect on the pulse.

You may not be able to say much from this outline of history and symptoms, but it was all I had to work on, as the failing heart came as a surprise and there was no time to do more than I did as I see it.

[The writer of this case report seems to be greatly worried about the fact that there had been no indication of any heart disease in this patient, and he is wondering whether there had been any unrecognized myocarditis present.

To our way of thinking, we do not need to refer to the heart at all in order to explain the symptoms and the course of the trouble. The heart merely gave out after it had been abused as long as it could stand it.

In the present attack, just as in the earlier one, one and one-half years ago, we have two parallel courses of events. Both times, the patient had been working very hard and had been eating while very tired. While it is not said what she had eaten the first time—on this last occasion, she ate dried-beef sandwiches and pickles; surely, articles of diet sufficient to tax a healthy stomach, let alone one that was weakened by overexertion. It may be that the woman happened to be menstruating and was thus even more under a strain.

At any rate, when the stomach found that it could not empty itself of the indigestible dried-beef and pickles, it rebelled, went into a spasm (literally!), which soon involved the diaphragm and, secondarily, the heart—by contiguity. As long as the stomach retained the objectionable articles of food, the spastic state persisted and, in the same degree, the heart was highly irritated and crowded by the periodical diaphragmatic contractions, the retching, vomiting, etc.

What we call acute indigestion leads to a fatal outcome in a sufficient proportion of cases to make us desirous to accomplish two things; first, to empty the stomach and wash it out; second, to prescribe antispasmodics rather than intestinal antiseptics. It seems to us that, if the hyoscine-morphine-cactoid tablets that were given at the very last had been administered on the occasion of the first visit, or, if, then, this patient had received large doses of hyoscine sulphate (1/1000 each, say 5 granules at a dose, repeated as needed), the spasm would soon have resolved and she might have recovered.

While the hot salt water to capacity, which was ordered at first, was very good, it would have been rather better if the doctor had introduced a stomach tube and washed out that stomach, making sure that it was empty. He might then have filled it up again with hot saline solution, when it would have been in splendid condition for the absorption of those remedies that he considered to be indicated.—Ed.]

#### THE SOCIETY FOR CINEMATOGRAPHIC INSTRUCTION IN MEDICINE AND SURGERY

The Society for Cinematographic Instruction in Medicine and Surgery, with headquarters at 105 West 73rd St., New York City, announces that, after two years' intensive experimentation with various cinematographic

technicalities, it is now ready to proceed with its full program.

"It has been necessary to make a lengthy and accurate test of cameras and of various methods for filming, developing and printing of films, which procedure has consumed considerable time and money," James S. Edlin, M.D., president of the society, states: "We now have in charge of our film production a man who has had many years' experience in the production and distribution of educational and pedagogical films—Mr. Samuel A. Bloch. Mr. Bloch organized the Educational Department for one of the most prominent film companies, and has produced educational and technical motion pictures independently. He is both an educator and a trained motion picture executive."

The society is now ideally equipped, Dr. Edlin says, to produce films for the medical, surgical, dental, drug and allied professions, and invites correspondence from all those interested in membership in the society, as well as those desirous of securing excellent and truthful motion pictures.

Among the cinemas already produced by the society are the following: A Study of the Motor Control of Gait and Posture, from the Neurological Division of the Montefiore Hospital, New York City, S. P. Goodhart, M.D. Director, and a Study of Diseases of the Nervous System, from the Neurological Division (Cornell College) of Bellevue Hospital, New York City, Foster Kennedy, M. D., Visiting Physician in Charge—both produced under the direction of Walter M. Kraus, M. D.; Root Resection, Adolph Berger, D. D. S., Oral Surgeon, Vanderbilt Clinic, New York City; Presentation of Surgical Cases from the Hospital for the Ruptured and Crippled, New York City, under the direction of Charlton Wallace, M. D., Associate Surgeon and Chief of Clinic.

#### DR. ALBRIGHT CALLS CONVENTION

A call is being sent out by Dr. J. D. Albright, 604 Perry Building, Philadelphia, to all physicians interested in the office-treatment of Rectal Diseases by ambulant methods.

The idea back of the call is, to form a permanent organization for mutual benefit, annual meetings to be held in various parts of the country.

This first convention will be held at Roycroft Inn, East Aurora, N. Y., beginning July 21, 1924, immediately following the annual convention of Roycrofters, the Society of Immortals, founded by the late Elbert Hubbard.

The treatment of rectal diseases by non-operative means has been developed to a high degree of perfection, and an association of the men doing this work is entirely justified. Those interested further should address Dr. Albright.

#### FIRST DISTRICT—UNITED STATES CIVIL SERVICE EXAMINATIONS

##### *Physician*

Receipt of applications to close June 30, 1924

From the eligibles obtained as a result of these examinations all vacancies now existing or hereafter occurring in medical positions in any branch of the United States Civil Service in New England will be filled. Eligibles are desired at once for the following vacancies:

##### *Physician, Grade A, Neuro-psychiatry—*

One vacancy in the U. S. Veterans' Bureau at Boston, Mass.; salary \$3,000 per annum; full-time duty.

Four vacancies in the U. S. Veterans' Hospital at West Roxbury, Mass.; salary \$1,800 per annum and quarters, subsistence, and laundry; full-time duty.

One or more vacancies in the U. S. Veterans' Hospital at Northampton, Mass.; salary \$1,800 per annum and quarters, subsistence, and laundry; full-time duty.

##### *Physician, Genito-urinary—*

One vacancy in the U. S. Veterans' Bureau at Boston, Mass.; salary \$1,500 per annum; part-time duty.

##### *Physician, Orthopedic Surgery and Prosthetics—*

One vacancy in the Veterans' Bureau at New Bedford, Mass.; salary \$1,200 per annum; part-time duty.

##### *Acting Assistant Surgeon, Roentgenology—*

One vacancy in the U. S. Public Health Service at New Haven, Conn.; salary \$3,000 per annum; full-time duty.

*Applications will be rated as received and certifications will be made as the needs of the service require.*

Applicants who are willing to accept the part-time position at the salary indicated should so state in answer to Question 28 of the application.

A full description of the examination is contained on Form 2400. This form and the required application Form 1312 may be secured from the Secretary of the Board of Civil Service Examiners at the postoffice at any of the places named above, or from the Secretary of the First U. S. Civil Service District, Customhouse Tower, Boston, with

whom the application should be filed not later than June 30, 1924.

*Amendments of Form 2400:*

The paragraph which begins "Applications will not be accepted from any one person" is amended to read as follows: "No applicant may apply for more than one of the above branches of medicine and surgery, except that an applicant may apply in one application for No. 1 General Medicine and Surgery, and one of the specialties."

The paragraph entitled "Grade A" is amended to read as follows: "At least one year of postgraduate full-time experience or special study in or under a recognized institution in the branch for which application is made or under a recognized specialist in that branch. For appointment as acting assistant surgeon in the Public Health Service for assignment to immigration work, the law requires that applicants must have had at least two years' experience in the practice of their profession since graduation. Applications for positions under the Veterans' Bureau for Grade A will be accepted from trainees of that Bureau who have, as trainees, received the degree of Doctor of Medicine from a recognized medical school but who have not had the required experience. They may be certified only for positions under the Veterans' Bureau where the entrance salary does not exceed \$2,400 per annum and where their work will be performed under supervision."

The paragraph entitled "Medical certificates" is amended to read as follows: "The medical certificate must be executed by a physician in the Federal Service where practicable. Persons selected for appointment may be required to submit to a physical examination by a physician in the Federal Service before actually entering on duty."

SECRETARY of the  
FIRST U. S. CIVIL SERVICE DISTRICT,  
Customhouse Tower,  
Boston 9, Massachusetts.

Issued:

April 16, 1924.

### MEDICAL MÉLANGE!

#### "Drives" and "Grafts" at the Expense of Doctors

The saying, that a worm will turn, may be true. But, there is so low a type of resistance in so many of the dear "brethren" of the medical profession, that it has led me to feel that many of them have "worms"!

There are the wormy devils that are after

the little money we collect; for one fool thing or another, fostered by a drive for this, that or the other, and it keeps an easy-mark broke trying to be a good fellow. That reminds me that the synonym of "good fellow" is, just plain "damn fool"!

Many times, I have thought that we should have a real hammer-and-tongs course of plain, business commonsense drilled into the seniors, and all the rest of the students as well, for that matter, ere they are turned loose to fend for themselves at the mercy of the public!

Many of the old saws about taking on all the poor and the bums and the rounders, the chronics, etc., so as to cultivate acquaintance and get a footing in a community, to establish a reputation, is the bunk. The charity graft is one of the worst things that the average doctor falls for. The profession idealizes the Dr. Maclure type of the "Beside the Bonnie Briar Bush" tale. That may have been the thing in its time and day; but, times have changed.

The landlord wants his rent the first of the month. The grocer, the butcher, the baker and the rest all along the line want their money and want it soon, or the "poor fish" can go hang for all the sympathy he will get, if he has not the wherewithal to meet his needs and anticipate his dues.

I can not complain even a fraction as much as most doctors, as I have my own home and other property, all paid for; also other investments. I am free from debt, my children are well and grown up, and the wife of my youth is still at my side.

However, I have been an observer and a student of medical economics. I have seen the meek, submissiveness of the average doctor, the popular, silly belief that a doctor, especially a young man, in trying to get a footing of economic independence and established business or practice, must or should go through all the fool slavery of ancient practice that was the vogue in the time of a past generation.

I am sore set against any kind of graft that takes cash or professional skill from the medical man without just compensation.

I am against free dispensaries as they are now being conducted. I am against any contributions from the doctor to any kind of a disease-fighting campaign, because they, the doctors, do much more than they are ever paid for in service to the public and in developing the means of lessening disease, suffering and premature death. They should not be made victims of still further contributions in

the form of cash in the various campaigns and drives that we now have with us, like the plagues of Egypt.

Many fools think that, to be a doctor, is to be rich. Well, perhaps, if they refer to being rich in experience, I can agree with them. As for the riches of the goods of the world, the doctor is lucky if he gets enough to keep soul and body together. As a matter of fact, I have often wondered if the old style of wearing a Prince Albert coat was not intended to cover up the holes in the seat of the pants, from much sitting and wearing out while awaiting the hoped-for practice to develop.

Investments? Do not make me laugh! Did the rank and file of you ever stop to find out what the average cash income of the medical fraternity is? Well, it is less than \$800 a year, right now.

If the average physician could only make a living! But he exists with the help of his Dad's cash or by a financial marriage or, perhaps, gets a little help by borrowing. You do not know how many of us are in debt. Why, I know of one doctor who was paying interest for seventeen years on a mortgage of the house he lived in and then it was paid off, finally, by an inheritance of the wife. I have known of two men that were partners for the better part of twenty years and then had over seven thousand dollars in uncollectable bills on the books. That is not so exceptional as many a comfortable or cynical brother might think!

I was entertained at dinner by a very able brother of the profession in a distant state. They lived very, very plainly and his wife kept boarders and roomers to help out. The business was not very good; yet, here was a Rush graduate and an able man, with a big load of responsibility to carry, and his family doing all they could to help out. And it was a mean existence in a rented house.

Why is it that the doctor is selected as the "fall guy" (I say this advisedly) whenever there is a charity job to be done?

What with lodge-practice done below the price of chicken feed, Chiros, Neuros, Osteos, Christian Scientists, Faith Curists, and the laying on of hands (on the pocketbook), and a host of other faddists, and no economic shoulder-to-shoulder sticking-together to keep from falling separately by the wayside, the profession has not the gumption of the average union laborite, who has the good sense to join his fellows and map out a program and stick to it. He is gaining right along and so much so that, on the average, the skilled

tradesman is making about twice or more times as much as the average doctor without anywhere near his overhead!

—

Now, when there are laws to look after the poor and indigent, the lame, halt and the blind (I often wonder what kind of blindness it is that the doctors have who, having eyes, yet they see not), and the unfortunate are all provided for by law. Beggars can not be choosers; and, so, whenever we have that kind of a case, it behooves us to refer them to the city physician. If it is in the country, we have a county physician and, in some states, the town boards select a doctor to do the doctoring of the poor and indigent of the township. In the small cities or towns, there are supervisors of the poor who select a doctor, and he is paid the regular, customary fee.

On account of these wholesome provisions and of the fact that they can be made to work (except in a case of dire emergency), no doctor should attend such people without the proper authorization of the proper official. The grocer does not, nor the clothier, the butcher, the landlord, etc. But it is expected that the doctor should break his neck to do, *at his own expense*, what no other class of the community does nor is expected to do.

We claim to be a Christian nation and have put the provisions for the poor and helpless as well as the vicious into the hands of the authorities, so that all that are not in position to look after themselves can be looked after properly, humanely and decently.

*Therefore, physicians as a class should refuse to be the "fall guys,"* doing operations at their own expense, buying dressings and making the necessary calls, day or night, while the upkeep of their equipment is paid out of their own pockets. Every other class of people in business has no compunctions in calling the attention of the authorities to the fact that the law makes provisions for the poor and helpless *out of the public purse*.

Therefore, I have made it very clear and plain that I do not do charity work, that this work is provided for out of the public tax funds. *I am not under any personal obligation to do what all should share in paying for in the doing. That is justice and commonsense!*

*When will the medical profession as a whole ever learn common sense and apply good business judgment?* There is a business as well as a professional side to our life, and I have a card in large letters in my office stating:



"Office Practice is Cash. If not prepared, please make arrangements before consulting the doctor."

I have it placed so that every patient or prospective patient can see the card when I am talking to him, and it is rarely that he or she does not speak of the money matter before we get to the end of the interview. It pays me well, and I do not fall for the pleas for time or credit, especially by the out-of-town people. For, when a person leaves the home doctor to see one in the city, he is presumed to have the money to pay for his services.

I have run through a year with an exclusive office practice and lost only two-tenths of one percent. Can you beat it? Usually, it occurs that I lose about two to three hundred in a year and no more. I have educated my people to pay as they go or not go; or go to some one else. I want to assure you that my clientele, in the main, is satisfied; and they not only come again, but send others to me as well. They tell others to come prepared with the money, too, and they expect to pay and they do pay.

It pays to put your practice on a business basis. In that way, you can get ahead and take vacations and trips and buy books and cars and instruments and save money and make some investments as well, and live and keep out of debt.

Now, I will give you an idea as to some types of callers that I have. It is well known that I claim to be somewhat of a dermatologist.

An old man, a rounder, belonging to the broke, down-and-out kind of a ne'er-do-well, came in, one day, and, as I was not busy, I made a study of him and his ways.

"Dock! I want to see ef yew kin dew anything fer me. I am all shot to pieces with the rheumatiz, and I have a bad stummick, and have the piles, and a good deal of gas after I eat.

"I feel all run down, and can't seem to get any pep. I tell ye, Dock, ef ye kin git me fixed up, it'll be a big feather in yer cap and then, besides, I have a lot of friends that I kin send ye, and it will be a big help to yer business."

I told him that that sounded very good. If he would kindly tell me where I could negotiate feathers as currency, I could undertake his case when he delivered them. Furthermore, if he had such a valuable lot of friends, it would be only right to prove it

and, if he was willing to write a card of introduction for each that he sent me, I would give him a collector's percentage on all cash business he sent in. In that way, I would have the benefit of his influence and he could put it on a business basis and be good for us both. The old devil looked at me and, with a sickly grin, he sneaked off and I have never seen him since.

Another case in point is, where I prescribed a stomachic with brandy and incorporated medicines. The fellow came back soon and said, he wanted a quart. I told him that I used my own judgment in my office and, if he wanted to be the judge of what I was to do, he had better not come to me. He then wanted his money back for the prescription. I refused. He said he'd hate to tell me, but he had a lot of friends and could damage my business. So I told him to tell his friends, as it would be a great favor to me; for, if his friends were like him, I much preferred that they stayed away from my office. He left and, later, being in need of professional services he came again and paid without grumbling.

In another instance, I put a tough fellow out of my office and told him I never wanted him to come back; if he did, I'd throw him down stairs. In about four months he came back, slicked up, and brought in a man for whom he interpreted to me and I got a nice fee from the case.

So, you see, if you are weak-kneed, you only lose by it. Stand up and respect yourselves; then others are sure to respect you!

Speaking of grafts: I know a minister that told me he got \$5 from a certain specialist for every case that he sent to him, with a note of introduction. He sent quite a good many, too! This same minister also worked the local profession (like others of the cloth) for the benefit of the poor of the community wherein he resided and used his influence with the well-to-do to induce them to go to the big man in the nearby large city and leave the local M. D.'s flat on the good cash-pay cases.

These are reels from my own camera, as it were. Others can tell of the same and worse. It is sometimes a good thing to work the steam of this stuff out of our systems. The application can be made and the "fellow sufferers" can glow with that fellow feeling.

You know, it is often a bore to read a wad of "stuff" in stilted language, seeking to convey the impression of our ("ahem") great learning! I find that getting right down to

brass tacks and doing my own thinking is the only way to success.

Now, I have a serious purpose in writing this batch of ideas. It is for us to get together on the economic field and fight to get ahead by united action, as we have too long held our peace and been the prey of the Easy-Mark Fleecers in charity, local and foreign, as well as of the stock-grafters and sellers of everything that we do not want or need, etc. We have so much and often overworked the sympathy for others that we have too greatly lost sight of the duties we owe to our own household.

Let every physician own his home, be free of debts, and have a bit of surplus leisure to enjoy outings with his family and friends and neighbors, and get active in matters of good government; let him also get into the right kind of politics, as we are the beneficiaries or joint victims of laws good or bad, and it is our duty to be active in the political field as well as in every field we can spare the time for.

But, as to charity, that begins at home, and to do well by your own is as urgent a duty as to do your duty by others, only more so.

We must cease to be the shuttle-cocks of the purposes of others, but ever-alert to render good service. In a life of service and sacrifice, we should not put the accent on the sacrifice and let others capitalize it for their own benefit. Good work is worth paying well for. Seeing that we are well prepared for the doing of that work, requires that it is paid for at a decent rate.

Too many are too indecently humble in their concept of values. The "Good Book" says: "He that provideth not for those of his own household is worse than an infidel!"

I am not railing against the things that give exercise to kindness of heart, sympathy and help, but I want to crack the shell of stupidity off those of the brethren that are carried away by the doing for others to the extent of their own undoing! We lack in many ways, too many of us, a sense of eternal fitness of things, a sense of even-handed justice, that is fair to him that gives as well as to him that receives.

In plain language, I want to see a lot of us get our ideas of professional common sense straight; I want them to cease letting the ungrateful of the public make of them a thing for their selfish convenience.

We get, the good Lord only knows, plenty of good advice to do for the other fellow, but we need some training in that just discrim-

ination that will cause us to cease to be a "good thing" for the grafters and deadbeats and ne'er-do-wells at our own expense. Not to demand that the community do its share through its own official and financial channels, is to make of us a thing of use as a dust-pan or a scrub-bucket, just to do the dirty work of the down and outs.

In the pre-Volstead era, it has many times fallen to my lot to look after those with venereal infection, and many came to me "broke" after having spent their substance in riotous living, on wine, women and song, and gambling. Then, after the harvest, one of the tares was often found to be, venereal infection.

When a broken tinhorn sport came to me with his whine of woe, asking me to 'take his case, I would ask him if he paid for his liquor? "Yes." Did you pay for your sporting paramours' favors? "Yes"! Did you put up your money when you gambled or did you gamble on credit? "I put up the money!" "But what has that to do with your treating my case?" Well, I would say, it has everything to do with it. For, if you have money for the sports, the gambling, the booze, and in every case you spent hard cash, don't you think I am as deserving as the others that you spent your money with? If they only got your money and trimmed you all along the line, why in the name of good sense should not I, who am to put you back in decent physical condition, be far more worth paying your good money to than the others? At any rate, I should be treated as well as those others? Don't you think so?

This was usually a line of logic that they had never considered. I have even had them tell me that they did not want to be considered paupers, when I asked them to go to the public doctor, the city or county physician. The old idea, that the doctors are easy-marks, dies hard. Unless we, the medical doctors kill that idea, it will live on to a good old age when many of us are gathered to our fathers!

Our motto should be, "Live and let live!"

The golden rule should apply both ways, like a two-edged sword.

M. F. GEORGE.

#### MEDICAL CORPS, ILLINOIS MEDICAL GUARD

There are now five vacancies in the Medical Corps of the Illinois National Guard, 33rd Division. The shortages are in Chicago units. The Medical Regiment and two Line Organi-

zations. Ex-service officers will be given preference for these commissions. It should be recalled that officers and men of federalized units draw pay throughout the year.

Anyone interested can communicate with me at the following address: 5 S. Wabash Ave., Suite 2010; Telephone Randolph 0606, or call any Thursday evening, 3rd floor, 115 E. Ontario St., Headquarters Medical Regiment.

HARRY D. ORR,

Colonel Medical Corps,  
Division Surgeon, 33rd Division.

### BISMUTH TREATMENT OF SYPHILIS

The following is my experience in the treatment of syphilis with soluble bismuth. Some time ago, I had a series of three cases referred to me (all with four-plus Wassermann reaction) which I treated with intramuscular injections of Soluble Bismuth, obtaining in each case most satisfactory results. All of these cases showed a negative reaction in from five to six weeks following the last injection. I gave a dose every four days, until from twelve to fifteen injections had been given. After the third injection, the lesions began to disappear and very promptly cleared up entirely. There were no complications or reactions. The treatment is practically painless, free from objectionable features and unpleasant symptoms.

G. M. FISHER, JR.

Amaranth, Penna.

### ECHAFOLTA IODIZED (LLOYD)

Echafolta is a preparation of echinacea with 1/10 percent of iodine. It is for external use and combines the properties of echafolta and iodine. As an external application in septic wounds, in painful wounds, punctured wounds as from rusty nails, it is highly antiseptic and pain-relieving. It should be diluted for use as a moist compress. The wound must be kept constantly moist. If used full strength, it is apt to blister, but the blister is not painful and heals quickly. Used on sprains, it gives rapid relief from pain. On crushed or lacerated wounds, the pain is relieved at once. It checks foul discharges of cancers and lessens the pain. As a mouth-wash in septic conditions, pyorrhea, caries of teeth, it is soothing, antiseptic and healing.

Echafolta came to the writer's attention three years ago, when it was used as a moist dressing on a crushed thumb. The pain was

relieved as long as the dressing was moist. The wound healed rapidly, with little swelling.

A man knelt on a rusty nail, the nail striking the patella and sliding up along the bony surface for an inch. The wound was treated with iodine (toothpick swab) and dressed with echafolta. Pain, which was intense, ceased within a few hours and the wound healed without the infection extending to neighboring parts.

A woman stepped on a rusty nail in the barn and waited for three days before having attention. At this time, the whole foot was swollen, there was severe pain, extending from the toes to the hip, there was a chill with sweating and fever. The wound was enlarged freely and swabbed with iodine, then dressed in moist echafolta dressing, full strength. In twenty-four hours, pain and absent, swelling reduced almost wholly, patient feeling much better. Dressings ordered to be kept moist with diluted echafolta. Wound healed in a few days.

The druggist here had two fingers lacerated in an auto accident. Dressed with echafolta, four hours after the accident. Pain and swelling of no account. No infection, fingers healed in two weeks.

Horse kicked owner, sharpshod cork entered patella in center, without fracturing completely. Echafolta dressing with plaster cast for ten days; full recovery. Pain for two days, no infection, little swelling.

Many similar cases could be cited, all of which were controlled without infection. In purely septic cases, the history reads similarly. The infection is held within bounds and speedily recedes. One case, with extending infection to elbow from slight wound of thumb, treated for a week, healed rapidly, but an abscess of the fleshy part of forearm developed. It was lanced freely and healed speedily under moist dressings of echafolta.

I have asked many surgeons in these three years if they have used this preparation in their practice and it seems to be unknown to them. To the general practitioner, it is a godsend. Try it.

R. J. SMITH.

Westcliffe, Colo.

### HOSPITAL FOR SALE

There is for sale, in southern Illinois, a 15-bed, fully equipped private hospital; 5-room living apartment; city 7,000; \$10,000 practice included. Price \$10,000, terms, \$3,000 cash, balance on time.

# Let Us Play

Conducted by All of Us

## 'GETTING READY FOR VACATION'

[The subjoined article was clipped from the *Chicago Daily Tribune* for April 29, and, of course, has Dr. William A. Evans for its author. Unfortunately, it was just too late to be reproduced in the May issue of *CLINICAL MEDICINE*, much as we should have liked to do so. What Doctor Evans has to say, is as true now as it was last month and, as most physicians do not time their vacations until July or August, it may still be timely.]

In June, 1911, the American Medical Association was about to meet in Los Angeles. A train-load of physicians en route to the meeting stopped over for the day at the Grand cañon. They arrived about 7 in the morning. By 8, a large number of them were hiking down the Bright Angel's trail, afoot, hoping to reach the river and get back to the hotel by midafternoon. Those physicians had been on the train from one to three days, eating full meals. The only exercise they had was walking to and from the diner and pulling on cigars. At home they were busy men; getting to and from the office was almost the limit of their daily exercise. This trip to California was to be an outing and so was the walk of 5,000 feet down to the Colorado river, followed by another 5,000 climb to the top. A great many gave out and the management was busy until night hauling them out by the mule route.

The wrong way to start a vacation.

In July, 1911, the mountain resorts of western Canada were crowded with husky men and women. The Alpine Club was due to start its annual mountain-climbing expedition and these people had gone to the mountains several weeks in advance to harden their muscles, increase their endurance, and better their wind.

The right way.

In less than two months, the horde of summer vacationists will have begun taking their

outings. Now is the time to begin getting in condition. The days are long. There is time to walk to work in the morning and time to walk home after work and arrive in time for dinner before night. This will harden the muscles and add to the endurance.

There is time for work in the garden. A long walk on Saturday afternoon or Sunday will develop endurance. If the plans for the summer call for wind, a good way to get it is to walk up and down stairs several times a day. Tennis, handball, and baseball are good in developing the wind. Running and even rapid walking are more so.

One cannot get in proper condition for an enjoyable vacation—or for getting the most out of a vacation—unless one starts training several weeks in advance.

## CALLUSES ON FEET

[This article also is reproduced from Doctor Evans' column in the *Chicago Daily Tribune* and gives his views regarding the treatment of calluses. In this connection, we are reminded of a statement made by the late Dr. Frank G. Lydston when he reported on the gland-transplantation done on himself—which was in 1914. Doctor Lydston noticed that calluses on the soles of his feet, from which he had suffered keenly for long, disappeared entirely. That makes us think that possibly some selected endocrine-gland treatment may be of influence in the treatment of calluses. We make the suggestion for whatever it may be worth. We have no experience with it.]

J. A. D. writes: Would you give me some advice as to the treatment of calluses on the bottom of my feet. I have tried everything, including expensive shoes, but they do not seem to go away. Being an industrial policeman, I do a great deal of walking.

I am an ex-soldier, having been in the service of the government for fifteen years and in three wars and wounded in the late war.

I am 45 years old and, as I cannot take anything else now but an easy position, I do not like to give this position up on account of my feet, but at times the pain is more than I can bear.

Reply

You can remove the calluses by polishing the area with a soapstone made for the purpose, while you bathe your feet in hot water and soap.

Or, have them trimmed periodically by a chiropodist.

Or, the callus can be removed by applying a corn medicine. Corn medicines are solutions of salicylic acid.

To prevent them, you must restore the transverse arch in the ball of your foot. Have x-ray pictures made of your feet. These usually show that bony spurs or sesamoids have spread the bones. Operation will cure.

#### FROM MAINE

I have been at work here, on the shores of Moosehead Lake, since 1905 and have had some experience. When a man gets up in the woods above the lake and no doctor within 75 to 100 miles, he has to roll up his sleeves and go in; one can't leave it to George. I have had the pleasure of meeting some excellent men up here on their vacations; the best of them like to come up through the woods and lakes and many have urged me to write for the journals. I presume, some of my trips would be a diversion and make interesting reading around the fireplace, some stormy night. I have crossed the ice, ten miles of it all rotten, and none of it that would withstand one poke with a canoe pole, with hundreds of open patches of water, in the night; I have sunk a motor boat in the lake and swum ashore. I have walked around the shore, over 40 miles, in a day. I have skated 32 miles on it in winter in about 3 hours, ridden horseback, with mud and water to the stirrups, but have never turned back.

If you ever happen this way, take a look at the lake and call on me. I have a 30-foot, V-bottom, 7'8" beam, with a Lathrop 40 in her, the ablest marine engine made. I can give you a good, safe ride on the lake and bring you back. We have some excellent roads up into the woods and some fine scenery. Great trout fishing in the spring, and the region has long been a hunters' paradise in the fall. I have two boys, one 18 and one 10. We enjoy a day's tramp and I have a standing order that the Saturdays or non-school days

are my vacation days in the fall, to go with the boys and enjoy the woods. I have done this for three years and we have had some fine tramps. I got a buck, that dressed 170, last November.

The proposed new department in the JOURNAL ought to be an interesting one, I might be able to write something worth while for that (U won't care to print this, I feel sure.). One needs something to divert one's mind daily. I really don't know what a man in the city does for diversion, unless he goes to the movies. Must be monotonous not to have a chance to get stuck in a snow drift or a mud hole occasionally.

F. J. PRITHAM.

Greenville Jct., Me.

[Dr. Pritham's offer is accepted unanimously. It was accepted several months ago, when we asked for contributions to this department. Let us have those articles about life in the outdoors.

Diversion for the man in the city? Well, the movies help; it is true. Some of us like to go there for a mental rest. You see, you get some good music (if you go to the right place), and you don't *have* to look at the pictures, but can just dream; if you like that better. Then, there are concerts and operas and shows. Also, there are lectures and society meetings and card parties, or just talk fests. The city is not quite without opportunities for recreation; but, they are different from those described so graphically by our colleague in Maine. Tell us.—Ed.]

#### ST. AUGUSTINE, THE ANCIENT CITY

The train, that runs (*sic!*) from Palatka, Florida, to St. Augustine has been dubbed by some humorist with a fervid imagination "The Flyer," and the name is so appropriate in its irony that it is used by the general public who happen to travel in that section of the country today. Incidentally, it is said that there was an English writer once who visited there and who, later on, was at pains to explain to his countrymen that, in reality, the train was "not a fast one!" It is perhaps just as well that the matter was finally settled in this fashion as, otherwise, some one might have felt like getting out to see what the train was fast to!

Illustrating this last statement, there is frequently heard about there the story of the old darky woman who, living about twenty miles out of St. Augustine, did washing for some



white people who lived in it—St. Augustine, I mean. It seems, she was wont to carry the weekly basket of washing back, balancing it on her head as she walked. One day, the train was just moving (moving, that was all) out of Palatka, when the conductor spied the old woman starting with her washing for the Ancient City. Ringing down the engineer, he called to "auntie" and told her she could jump on and ride if she wished, and that he would take her in to St. Augustine and not charge her anything.

"No thank you, suh," it is related that the old woman replied, "Ah'm in a hurry today, suh!"

We were an hour and a half late, on the start, but we hadn't proceeded far when the train stopped, and the engineer and fireman, with axes on their shoulders, were seen entering the turpentine timber at the side of the track. Most of the Florida trains burn wood, and we supposed that they were in search of more fuel. Not so! After a half hour, they came back with a good bag of wild turkeys! What we had taken to be axes, in the excitement, had turned out to be their fowling pieces. Pleasure and business combined. And the waiting didn't seem to seriously discommodate anybody, so far as I could determine. Waiting is a thing that the average Floridan doesn't seem to desire—"to do anything else but!"

There was a typical old Southern colonel sitting in the seat in front of us. I didn't know that he was sleeping or I should have refrained from disturbing his repose.

"How near," I asked him, "do you think we are to St. Augustine?" He rubbed his eyes and looked at me as if he doubted whether I myself really understood the tremendous import of this question in all of its intricate ramifications.

Still puzzled, he turned and looked out of the window; but, not being able to identify any familiar landmarks, replied:

"How near we are to it? Well, suh, I caint tell you how near we are to it; but I believe we are gaining on it!"

We actually succeeded in overtaking St. Augustine in about two hours from that time!

The railroad station at St. Augustine is a long, low, rambling affair, built on the open-work plan, and made (as many of the Florida buildings, both public and private, are) of a mixture of stucco, white sand and shells.

The floors are of wood and stone. The building looked rather ungainly to the view, close at hand. Farther away, where one had

the advantage of perspective, it appeared not only picturesque but actually beautiful to behold.

Then it seems to be a huge white stone lying in the midst of flowers and gardens. Florida cities, especially St. Augustine, seem to run considerably to flowers, fountains, lawns and terraces.

As we emerged on the street side of the station, our ears were assaulted by an awful bedlam of sounds. Mostly, as it turned out, this uproar came from the megaphone lips of ducky "ca-idge drivahs" who were stationed in large numbers at the curbing. Apparently, a frenzied mob, shrieking for our life-blood, they were in reality peaceably enough inclined and were only inviting us severally and collectively to ride with them.

A "dollah a head" an hour, is the price, and if, for any reason, you wish to conserve your funds, it is well for you to call to the mind of the driver the minute and the hour when you start as his memory is shaky, at best and, indeed, in many cases his very reason itself seems to be tottering to its fall. Which latter is not a thing to be marveled at, when you recall that he is endeavoring to carry around in his kinky head the entire history of the universe which, according to his conception, had its origin, rise and fall in St. Augustine!

When, later on, in the seclusion of your boudoir, you take time to figure the exact time you were "on board" with the ducky driver, you will almost invariably be impressed with the fact that "time," the conquerer of all things mundane and astronomical, has turned backward, yes backward, at the behest of this St. Augustine carriage driver.

If you are inclined to create a small diversion, you may pretend to have decided to depend upon nature's means of locomotion and, accordingly, you start walking towards the city proper, the huge hotels of which you can catch glimpses of surrounded by their fronted palm gardens, terraces and fountains. The hotels are so numerous and so large that the city itself occupies those odds and ends of the original soil as they do not seem to have immediate use for.

You will not have proceeded far before you will be overtaken by one or more of the persistent carriage drivers, who either have no passengers at all or whose vehicles are only partly filled. You will hear talking near you, in a moderate tone of voice and, when you look, you will observe that the driver is keep-

ing pace with you and, you realize that, though he is not looking at you, he means you!

You are informed that he and he alone is the repository of all the worthwhile history of the place, and that, should you endanger your life by not taking passage with this driver, you will miss all or nearly all of the priceless treasure. We took this risk thrice, but finally surrendered and got into a carriage. The driver turned out to be the biggest liar I ever encountered and, so grievously did he mix up fact and fiction, that separating the truth from the lies would be like trying to isolate and identify the various elements entering into the composition of restaurant hash. He systematically discolored everything with his lies except what I took pictures of!

Speculation in the human mind, regarding the ancientness of things, travels back, naturally, to the first of the kind in existence, i.e., to the beginning. As in the "Revealed Word," time runneth not back of the Garden of Eden, so the mind of the St. Augustine carriage driver is unable to imagine anything which purports to have had origin pre-existent to the founding of "The Ancient City." On this very point hinges the pecuniary income of several men there who are the owners of buildings and things which are classified as *ancient*, *ancienter* or *ancientest*, according to which one of these men you consult for data. Amongst the oldest houses there, you will find difficulty in establishing "priority rights," as one might say, among the various claimants for the distinction of being "oldest." The driver takes you around, first, to the oldest of the lot and then, with sublime indifference to the natural limitations to your credulity, immediately shows you several others that are "a good bit older!"

Whittier's oldest house has a sign on it reading: "Whittier's Oldest House in the United States" and bears a date of "1516."

Then the guide showed us "Vedder's Collection" which, he stated, was fifteen years older "dan dat 'un!"

We got out at the doors of these old structures, paid our respects and two bits apiece, and saw the old furniture and things inside of them. This latest prevarication of the darky moved me to a feeble attempt to crystallize the unnatural dénouement in verse:

"The Oldest House in the United States!

And I humbly took off my hat;

But, around the corner, he showed us one.

That was "fifteen years older than that!"

The date given for Whittier's Oldest House is 1516. The date of the "Vedder Collection" pile is problematical; it is simply spoken of, as "The oldest, *old* house."

Neither of them could probably antedate the other by more than a year at most. There is also a claimant for distinction along this line in the shape of an old church or, rather, a new church upon an old foundation. But, it is hardly in the race with the two other structures just mentioned.

Following the sea-wall, we came to the long bridge, which crosses an arm of the Atlantic Ocean, about a quarter of a mile long, and which connects the mainland with the long key, or island, which is called "Anastasia."

On this island, there is a lighthouse of the same name which is something near one hundred and sixty-five feet in height. The lamp at the top is so large that eleven or twelve people can find standing room within it. The outside of the lighthouse is painted spirally from the ground up in alternate widths of black and white, each broad band of color completes three revolutions around the structure on its way to the top. This insignia stands as an identifying characteristic to mariners out at sea, where the lighthouse can be seen for twenty miles. The light is of the revolving type and makes three revolutions per minute of its one-million-candlepower ray, at night.

We were allowed to purchase drinks of water from "the fountain of youth" and, thereby, assure ourselves of "immortal life" and "eternal youth." This is supposed to be the identical fountain of youth discovered by Ponce De Leon, in the year 1513. It may be, as claimed by the good woman who sold us the drinks, that Ponce—don't call him Pawnk, Punth, Pawnky or Punkey, but just plain Ponce—actually did discover unaided this particular spring, but I heard it darkly hinted, by a party who requests that his name be kept from the public, that Ponce paid an old Seminole squaw eleven dollars and fifty cents in gold to tell him the whereabouts of the fount, and that then he died of a broken heart because he discovered that the same squaw had sold the secret of the whereabouts of forty or fifty other springs each of which she had guaranteed to possess its identical properties!

The "City Gates" is a wonderful resort for the kodak fiends and, owing to the number and activity of the latter, it has probably appeared more often in photograph than almost any other ancient thing in or about

## St. Augustine.

Some time ago, when the influx of tourists and sightseers had just begun for the season, an old man suddenly appeared at the City Gates with a long-horned ox hitched to a prehistoric looking cart. He also was armed with a camera and it became in time a common custom for people to be photographed sitting in the cart and endeavoring to keep a tight enough clutch upon the reins to restrain the headlong impetuosity of the ox upon the rare occasions when he was awake.

The old man saw his opportunity and took it. Every winter since then he has been at the City Gates and has been taking opportunities at the uniform rate of fifty cents per take!

Upon the front side of one of the Gate posts, is a brass plate which has, in raised letters, a long legend in the Latin tongue. I was eager to get out, translate the story, and give it to the world. In fact, I would have done so had it not been for the miserly sordidness of the other occupants of the carriage who, evidently, thought more of the fourteen or twenty dollars the darn driver might have charged them while I was doing so than all that this message might mean to humanity. But I humbly gave in, and we went on.

Fort Marion, which was started as a work of coast defense by the Spanish government, in the year 1655, was finished in its present form as a redoubt fortification in the year 1755. By reason of its various escarpments, casemates and bastions, it is somewhat stellate in appearance. The old style of architecture, in vogue in the Middle Ages, prevailed in its construction. It is, in fact, surrounded by a historic moat. Into this moat, water could be admitted from the Atlantic Ocean in sufficient quantity to provide enemies, attempting to take the place by storm, with a nice cold bath.

The sightseer enters the fort, which covers about four acres of ground, over what was probably originally the "draw-bridge," though at present this is a permanent structure. All the other buildings of the ancient day, in St. Augustine, were made of a substance called "coquina," a compound of ground-up shells and cement, or stucco. There is upon the Anastasia Island a large bed of this material and it was used largely in the construction of the fort. The walls of the latter are some fifteen feet in thickness. Beneath these walls, are located the underground prisons where, in the early days, prisoners of state

as well as those taken in battle were confined. We were privileged to inspect several of the underground prisons, through the courtesy of a representative of Uncle Sam. He crawled ahead of us and carried the lantern through the tunnels which lead from one of the "chamber of horrors" to the next, we following along behind him on all fours.

We were glad to regain daylight some forty minutes later, and felt like congratulating ourselves that it had not been our unfortunate lot to be left to starve to death in any of the underground chambers we had just seen; for, this often was the disposition which the Spanish Government made of its state prisoners.

The climate is so cool and pleasant in St. Augustine that the Floridians who, throughout the rest of the state, openly admit that they live on fish in the summer and sick Yankees in the winter, are here allowed to enjoy the latter as a steady means of sustenance, the year around.

By this time, it was beginning to get dark. We were close to the hotel and, with a poignant grief at parting (the intensity of which can be sufficiently made clear to the mind of the reader only by mentioning that we parted with a "ten-spot" each at the same time) we dismissed our driver and went to supper.

J. A. DUNCAN.

Greeley, Colo.

## FROM THE SOUL OF GOD

There's a sweet, subtle sort of a something,  
Embraces the souls of men,

When the spirit yields

To the charms a-field,

'Mid meadow, stream and glen—

A sweet, indefinable something,

As pure as the incensed shrine;

And the searching grasp

Of the heart may clasp

"The something seemed divine."

Perhaps it's the calm and quiet,

Or the balm of the pure, free air;

Or the choiring words

Of the happy birds

Which await our coming there.

To me, 'tis the true cathedral,

By the hosts of sin untrod;

And my spirit kneels

And softly feels

A throb from the soul of God.

CHARLES HEDDON.

# What Others are Doing

## ARSPHENAMINE VS. NEOARSPHEN- AMINE, WITH A REPORT OF 1,609 INJECTIONS

For some time, syphilographers have been agreed in the conclusion that the best results are obtained in the treatment of syphilis from using arsenic, mercury and the iodides in combination rather than limiting their efforts to the administration of any one of these drugs. While the best forms of mercurials and of iodides are fairly well established, the newer forms of arspenamines have had to make a place for themselves and there has been much discussion concerning the relative value of arspenamine and of neoarsphenamine. A report of 1,609 injections recently presented by Dr. Edward Lester Merritt to the Fall River Medical Society and published in *The Military Surgeon* for September, 1923, makes reference to this discussion.

The treatments were given to 373 individuals covering a period of five years; partly in the U. S. Naval Hospital, Newport, R. I., and partly in private practice. Of the 373 patients, 63 were females and 310 were males. Under the term arspenamine are included all the various salvarsans, arsenobenzols and arspenamines; respectively the "neo" preparations. The possibility of difference in results owing to variations in technic was eliminated by the fact that the drugs used in treating these patients were mixed and prepared for administration either by Doctor Merritt himself or under his direct supervision—all injections being done by himself personally.

Having these patients in a hospital makes supervision easier. Of these 373 patients, 260 were under such observation. The remaining 113 seen in private practice did not have the same close supervision. The data secured from them were in the form of reports and not from direct observation.

Reactions may be divided into the following groups as arranged by Dr. Eichenlaub, of Washington, D. C.:

1. Immediate table reactions, (a) nitritoid crises which are acute anaphylactoid reactions, occurring at the time of administration of the drug; (b) collapse resembling closely surgical shock.

2. Intermediate reactions. These come on from 2 to 48 hours after treatment, but usually within 12 hours. They consist of headache, nausea, vomiting, diarrhea, abdominal pain and perhaps chills. One may meet with all or any of these symptoms.

3. Late reactions, consisting of hemorrhagic encephalitis, which is very rare: (a) jaundice due to toxic hepatitis from arsenic (which reaction Stokes and Ruedman observed an increase of 1,000 percent in their cases from 1918 to 1920); (b) rashes of erythema scarlatinoides type due to poisoning of the skin with arsenic. Such rashes may vary from a mild erythema to a fatal exfoliating dermatitis.

It must be borne in mind that reactions in man are intimately connected with the large volume injected intravenously in the course of arspenamine treatment. Neoarsphenamine requires but about one-fifth to one-thirtieth the volume that is necessary in using arspenamine.

All of the patients listed in the report received mercury and arsenicals and most of them also received potassium iodide.

The first series comprised 448 injections of salvarsan (Metz), administered to 110 patients and of which 439 gave rise to reactions. Namely, nausea and headache in 294 cases; nausea and vomiting in 94; nausea and vomiting together with a febrile reaction in 51; no reaction whatever in only 9. In most cases, the reactions were more severe after the second and third injections. The dose at each treatment was 0.6 Gram.

The second series deals with 674 injections of arsenobenzol (Dermatological Research Laboratories, Philadelphia), administered to 200 individuals. One patient collapsed on the table, but recovered. Two had dermatitis exfoliativa; one moderately, the other so extensively that he lost his entire epidermis, hair, eyelashes, fingernails and toenails. The peculiar part of this latter reaction was, that it came on after the second injection, whereas, according to the literature on the subject, this type of reaction usually follows intensive treatment. The patient was in the hospital three months before he entirely recovered. Simple nausea followed 207 injections; nausea and headache followed 103; nausea and vomiting followed 117; nausea and vomiting and a febrile reaction followed 96. No reaction

whatever followed 151. The dose in each of these injections was 0.6 Gram, the same as in the preceding series.

In the third series, the arsphenamine distributed by the state of Massachusetts was given to 14 patients in the number of 65 injections. The first dose in each case was 0.4 Gram and the others 0.6 Gram. Every injection was followed by severe nausea, vomiting, flushing of the face and conjunctivæ and a febrile reaction.

Thus, a total of 1,187 injections of arsphenamine was administered to 324 individuals. Only in 160 instances did a reaction fail to follow the injection. In those patients showing primary lesion, the latter usually healed after the third or fourth treatment (eight-days' intervals); secondary lesions usually cleared up clinically after the fifth injection. In most cases, the Wassermann reaction became progressively weaker, although the author attributes less importance to this than to the clinical improvement.

In a further series of 422 injections, administered to 49 individuals, neoarsphenamine (D. R. L., Phila.) was employed exclusively. In all instances, the first injection was 0.3 Grams, the second and third 0.6 Grams and the remainder 0.9 Grams, the latter dose equalling 0.6 Grams of arsphenamine.

Simple nausea followed 164 injections, nausea, vomiting and a febrile reaction followed 47, and one patient had dermatitis exfoliativa to a very slight degree. No reaction whatever followed 210 injections. It is interesting to note that the patient developing the dermatitis exfoliativa was one of the two who, two years before, developed the same condition following the injection of 0.6 Gram of arsenobenzol.

In all cases of primary or secondary lesions, the patients showed marked improvement after the second injection, and all lesions healed in practically the same length of time as under the arsphenamine.

#### Conclusions

1. Neoarsphenamine is as valuable a therapeutic agent as arsphenamine.

2. A reaction of some sort, although often slight, is to be expected in from one-third to one-fifth of all injections.

3. Neoarsphenamine is not as toxic as arsphenamine.

4. Neoarsphenamine, because of the fact that it can be used in such small dilution, causes less shock to the patient and is thus more to be desired than arsphenamine.

A man should never be ashamed to own he has been in the wrong, which is but saying, in other words, that he is wiser today than he was yesterday.—Pope.

#### SOME PROBLEMS IN GALL-BLADDER DISEASE

Discussing the problems confronting the surgeon in association with gall-bladder disease, Moses Behrend (*Med. Jour. and Rec.*, March 5) stresses the importance of making a differential diagnoses between cholelithiasis, nephrolithiasis and gastric or duodenal ulcer and appendicitis. Cholelithiasis is by no means limited to stout individuals past forty who are usually good livers; it may be found in lean persons. This may add to the difficulties in differentiating between gall-bladder disease and pyloric or duodenal ulcers. Sometimes, a differentiation between gall-bladder disease and a diseased appendix placed high is not possible until the patient has been anesthetized. A perplexing trilogy of diseases presents itself when it is necessary to differentiate between renal colic, gallstone colic and a high appendix. In gallstone colic, the history of the patient may be helpful to a diagnosis, when he has had symptoms of a long standing indigestion. In renal colic, there are certain urinary reflex pains. However, the physical examination must assist materially in the diagnosis. In gall-bladder disease, tenderness is found under and just below the costal border; in renal colic, the point of greatest tenderness is in the loin space, while many cases arise where it is absolutely impossible to make a differential diagnosis between a high appendix and gall-bladder disease.

Another important point is, to remember that the gall-bladder may be a focus of infection that is responsible for producing certain myocardial changes and long-continued disturbances in the temperature balance in the patient. The condition known as extrasystole of the heart has been benefited and has even disappeared after the removal of an infected gall-bladder.

The definite relation which undoubtedly exists between gall-bladder disease and glycosuria is presenting less difficulties now, when it is feasible to prepare diabetic patients for operation by means of insulin. Certainly, the risk in operating upon diabetics who suffer from disease of the bile passages is lessened in that manner.

As to the operation to be performed, Doctor Behrend insists that cholelithiasis should be done by the open method, so that the structures can be visualized. Efficient drainage should be maintained in all cases of cholecystectomy after operation on account of the danger of subhepatic or subphrenic collection.



Such collections are indicated by pain in the shoulder which is a pathognomonic sign. It may arise suddenly after operation or there may be entire comfort for several days, a week or more before the symptoms of the collection in the subphrenic space present themselves. The pain usually is excruciating, radiating to the right or left shoulder and is always worse at night. The expression of the face is anxious, with protruding, glassy eyes. Respiration rapid. Physical examination will show an increased liver dullness and the increase in the resistance over the ribs. According to Behrend, the best method to find the exact location of the fluid is by means of the exploratory needle and the x-ray, preferably the former. Wherever it be found, a free incision should be made. If the fluid is high up, it may be necessary to resect a piece of the rib.

It goes without saying that the surgeon should be fully familiar with the anatomical relations of the bile ducts and blood vessels. Only by this means is it possible to eliminate all injuries to the common duct.

The preparation of patients, who have chronic jaundice on account of obstruction of the common duct due to injury or disease, is of the greatest importance. These cases should have a complete blood chemistry, urinary examination, blood pressure, blood count and coagulation time taken. At least forty-eight hours before operation, the patient should receive calcium lactate by mouth or calcium chloride intravenously; he should be digitalized and receive 1,000 Cc. of salt solution by hypodermoclysis. After operation, the digitalis should be continued and another 1,000 Cc. of saline should be administered. A blood transfusion should be given before and after operation when the hemoglobin is low or when the blood coagulation time is much prolonged.

It is always desirable to check up our work by means of experiment work on animals. In this way, many surgical problems can be made clear.

#### THE TREATMENT OF MALARIA

In the *American Journal of Tropical Medicine*, July 1923, Dr. M. F. Nunez, Medical Director of the Colombia Syndicate Hospital, Barranquilla, Colombia, has an excellent ar-

ticle on this subject.

Dr. Nunez as medical officer, for three years, of a large industrial organization operating in the Lebrija River Valley, Colombia, a region dreaded because of the unusually severe malaria endemicity, had under his observations over 8000 cases of malaria, in the proportions of 6 percent quartan; 44 percent tertian; and 50 percent estivo-autumnal. The official hospital records show a mortality of 0.2 percent for these cases and the death rate for the pernicious types is 6 percent. Dr. Nunez gives a complete and detailed account of his method of treatment and the following summary:

In a series of 8000 cases occurring in tropical practice, the mortality was reduced to 0.2 percent for general malaria, and to 6 percent for the malignant types.

The arsphenamines promptly abort acute attacks in all forms of malaria, and are specifics in the tertian field.

Neo-arsphenamine in concentrated solutions—as much as 0.9 Gm. in 2 Cc.—fulfills all essential requirements of the higher dilutions. Technic of injection is given.

Neo-arsphenamine by rectum is efficacious.

Colloidal quinine in doses of 1 grain (0.065), is therapeutically equivalent to 15 grains (1.0) of ordinary quinine salts, and is nontoxic.

Colloidal manganese and iron are antiperiodic and reconstructive.

The management of acute, chronic, cachectic and pernicious malaria is outlined.

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#### [Concluded from Page 368]

will become more intensive. Subscriptions are entirely voluntary. Every person, firm and corporation engaged in any of the several divisions of pharmacy will be approached some time during the drive.

This movement looking to the establishment and maintenance of a headquarters building for American pharmacy is a very important one. Reference is made justly to the parallel case of the American medical profession which has gained materially in strength through the building of the A. M. A. in Chicago, with its laboratory, its testing business and its various far-reaching branches of activity. It goes without saying that such a national headquarters would lend strength to the unity of the American Pharmaceutical Association and we shall watch the progress of the drive with great interest.

# Among the Books

## "INTERNATIONAL CLINICS"

This volume of International Clinics contains three identical lectures, five articles on problems associated with the new-born; six articles dealing with diagnosis and treatment; two on rectal diseases; and two on industrial medicine. In addition, there is the Mütter lecture of the College of Physicians and Surgeons (The Gall-bladder, Its Past, Present and Future," by J. E. Sweet"); and a review of the progress of medicine for 1923, by Henry W. Cattell.

Among the clinical lectures, we are interested especially in that on exophthalmic goiter—for the reason that we have at present one such case in our care and are in touch with another one as consultant. Doctor Griffith's article, on heart disease in children—infantile cerebral paralysis, also is important. The articles on the newborn cover many of the essential phases, those on rectal diseases are contributed by two Chicago proctologists, Drs. J. Rawson Pennington and Chas. J. Drueck.

The "International Clinics" is a quarterly of illustrated clinical lectures and especially prepared original articles ranging through the entire field of medicine. It comes out in four volumes a year, the price of each volume being \$2.50. It is a most excellent record of achievement in medical sciences and medical practice and has been kept at a uniformly high standard, both by the editors and by the publishers. The latter are J. B. Lippincott Co., Philadelphia.

## BRAUN-HARRIS: "LOCAL ANESTHESIA"

Local Anesthesia, Its Scientific Basis and Practical Use. By Prof. Dr. Heinrich Braun. Translated and Edited by Malcolm L. Harris, M.D. Second American from the Sixth Revised German Edition. Illustrated. Philadelphia: Lea & Febiger. 1924. Price \$5.00.

This is a standard work on its subject and the fact that it has become available to English-speaking physicians is a cause for congratulation. The local anesthetic agents

that are discussed do not include the latest, Butyn, but that is hardly to be wondered at, since Butyn is a very new product and probably not yet known to Professor Braun. Still, the translator might well have inserted a paragraph regarding it.

We find that the treatment of the subject matter is otherwise very complete; and the text is scholarly without being unduly verbose.

## ABT: "PEDIATRICS"

Pediatrics. By Various Authors. Edited by Isaac A. Abt, M. D. In eight octavo volumes totaling 8000 pages with 1500 illustrations, and separate Desk Index Volume, free. Philadelphia & London: W. B. Saunders Company. 1923. Cloth \$10.00 per volume. Sold by subscription.

The third volume of Abt's notable system of pediatrics deals mainly with gastrointestinal affections and disturbances of the respiratory organs. We find a contribution by Dr. Clemens Pirquet on his "Nem" system of nutrition. The physiology of the gastrointestinal tract of infants and children is discussed by Dr. May Michael; the chapter on intestinal bacteriology by Dr. Arthur I. Kendall. There is a chapter on orthodontia by Dr. B. G. deVries. Dr. Daniel N. Eisendrath deals with affections of the cervical lymph nodes. Nutritional disturbances of infancy is the title of a chapter contributed by Dr. Abt himself, and that on gastrointestinal disturbances in older children was prepared by Dr. Clifford G. Grulee. Some of the other chapter headings are: Celiac Disease. Ascites. Diseases of the Esophagus. Diseases of the Rectum. Diseases of the Liver. Diseases of the Pancreas. The Diseases of the Nose and Paranasal Sinuses. Diseases of the Larynx. Respiratory Diseases. Allergic Coryza. Pneumonia.

## KEMPF: "PSYCHOPATHOLOGY"

Psychopathology. By Edward J. Kempf, M. D. Illustrated. St. Louis: C. V. Mosby Company. 1920.

Although this volume has been on our desk for a long time and although we have consulted it on frequent occasions, we have never

quite dared to prepare a review in the ordinary sense of the word: for the reason that this would be immensely difficult to one not specially trained in the subject. Nevertheless, we were and are greatly interested in this book which affords explanations for obscure points that come up constantly in our practice. For that reason, we announce it without reviewing the text and, at the same time, we offer our apologies to the publisher for our tardiness. It is impossible to quote a price, for the reason that the publication price may no longer be the sales price.

#### KINGSCOTE: "ORGANIC DISEASE"

Movement in Organic Disease. By Ernest Kingscote, M. D., C. M. Edin. New York: William Wood & Co. 1924. Price \$3.50.

If it were for no other reason, we would be attracted to this book by the remark found in the introduction: "We must never forget that it is not the disease we are called upon to treat, but the patient. It is Nature that cures; we only treat." The author informs us that he hopes to have been able to show that, by the application of certain movements and other appropriate methods, governed by well-known physical laws, to the human frame, it has been possible to aid Nature to benefit a large number of patients who were suffering from intractable disorders, or, better still, to enable them to benefit themselves.

Surely, the author's arguments are tempting and often convincing. His methods are worthy of being adopted and, we believe, will be successful at least to a degree.

#### WESTERMARCK: "HISTORY OF HUMAN MARRIAGE"

The History of Human Marriage. By Edward Westermarck. In Three Volumes. Fifth Edition Rewritten. New York: The Allerton Book Company. 1922.

To speak of a book as "truly encyclopedic in character" is to employ a formula that is decidedly trite. Yet, we are at a loss for any other designation that characterizes this remarkable work better. Westermarck's "History of Human Marriage" gives far more than the title promises, for he goes back to the pairing relation of animals and has investigated their family instincts and customs. The work is not easy to read, in that it does not present a sequence of ideas elaborated to a definite climax. Rather, it contains an enormous amount of facts, of data and of notes relating to the subject matter and which

are sometimes quite fatiguing. This is not a book for reading, the only way to peruse it is by close study.

All this is not said with the intention to criticize. It would hardly be possible to treat the subject in any other way; excepting, perhaps, in a brief popular article. It is surprising what an enormous amount of research has been carried out and has been utilized by the author. Since he cites at times the same facts and the same arguments in different connections, we find frequent repetitions of statements. That, though, serves all the better to fix important facts in our minds.

One of the outstanding assertions of the author, in which he is at variance with many other investigators, is that the marriage relation was not preceded by sexual promiscuity. He does not admit that the institution of group marriage is a remnant of such promiscuity, but claims that the establishment of the family goes back actually as far as the history of mankind itself.

It would be difficult to find anything having reference to the relations between the sexes that is not dealt with in this interesting work, and it may as well be mentioned that anybody who consults it through idle curiosity or with the idea of satisfying any lascivious fancies will be greatly disappointed. The language throughout is dignified and scientific. There is no suspicion of anything unbecoming or suggestive.

The study of the history of human marriage may well interest the physician who has leaning toward research in anthropologic problems. For that reason, we have thought it well to announce this book which we have studied, as much as time would permit, for more than one year before attempting to say anything about it.

#### ALBRIGHT: "RECTAL DISEASES"

Proceedings of the Clinic Demonstrating the Ambulant Technic in the Treatment of Rectal Diseases Held August 21 to 30, 1922, at The McVoy Sanitarium, Detroit, Michigan. By Jacob D. Albright, M.D., and George C. McVoy, M.D. A Stenographic Record. Published by J. D. Albright, M.D., 1530 Chestnut St., Philadelphia. 1923. Price \$5.00.

Doctor Albright was one of the earliest specialists in the treatment of rectal diseases and has particularly contributed to working out an effective and practicable ambulant treatment of numerous conditions of rectal pathology—a point which is greatly appreciated by the patient.

The book before us illustrates Doctor Albright's methods, in treating a number of rectal cases that were brought to his clinic, without selection, just as they presented themselves for treatment. The text of the volume is colloquial, as it naturally would be in a clinic, but it is graphic and contains some mighty good advice.

It is pointed out in the preface how very few medical men there are who devote attention to this field of practice which is not only promising in result but also highly remunerative. Physicians who have served their apprenticeship in general practice, and who are casting about for a specialty which will enable them to limit their work largely to office practice, might well turn to this promising specialty—providing that they have the proper qualifications.

#### NEVIN: "ANESTHESIA"

Conduction and Infiltration Anesthesia. By Mendel Nevin, D.D.S. Illustrated. Brooklyn: Dental Items of Interest Publishing Co. 1923. Price \$5.00.

This volume deals with the means at the command of the dentist to render his work as little painful as may be possible. The author is fully convinced of the great importance of this matter and suggests that dentists who are prone to forget it should have their own teeth treated so as to have the truth brought home to them.

Nerve blocking and conduction anesthesia have come to occupy a very important position in dental work and the author's beautiful treatise, which appeals to us as very excellent, will be appreciated by his colleagues.

#### "THE NATIONAL HEALTH SERIES"

This is a collection of twenty small volumes (pocket size) containing an average of only seventy pages of text and dealing with the main problems of health, presented in such a manner as to be of service to the laity. The volumes have been prepared under the auspices of the National Health Council and are published by Funk & Wagnalls Company, New York and London, at the price of \$6.00, net, for the set, 30 cents per volume.

There are before us the ten volumes of the series which have so far been published. They are as follows:

"Man and the Microbe. How Communicable Diseases Are Controlled." By C.-E. A. Winslow, Dr. P. H.; Professor of Public Health, Yale School of Medicine.—This description

of germs and germ diseases, together with practical methods of disease prevention, shows why the great plagues and pestilences, which killed our forefathers by the thousands in the middle ages, have been practically banished from the world. It describes what still has to be accomplished and contains definite proof that we have progressed.

"The Baby's Health." By Richard A. Bolt, M. D., Dr. P. H.; Director, Medical Service, American Child Health Association.—This little book aims to point out the basic procedures which are essential to the health and well-being of the baby. It is not its purpose to go deeply into the details of each subject; but enough is given to enable the mother to ask intelligent questions of the doctor.

"Personal Hygiene: The Rules for Right Living." By Allan J. McLaughlin, M. D.; Surgeon U. S. P. H. S.—Almost any person who wants good health can have it. The purpose of this book is, to set forth the hygienic precepts through which good health may be maintained in a brief, but thorough and practical manner.

"Community Health: How to Obtain and Preserve It." By D. B. Armstrong, M.D.; Sc.D.; Executive Officer of the National Health Council.—Every citizen owes to himself and to his community to take an interest in the health of the place in which he lives. This book is concerned not only with the responsibility of the individual in the field of public health, but it also shows what the health of the community means to him personally. [From the Introduction.]

"Cancer: Nature, Diagnosis and Cure." By Francis Carter Wood, M.D.; Director, Institute for Cancer Research, Columbia University.—The author of this book is probably better fitted than anybody else to offer a definite statement regarding what is known concerning cancer. Physicians should especially call the attention of their patients to the seventh chapter, on quacks.

"The Human Machine: How the Body Functions." By W. H. Howell, Ph.D., M.D., LL.D., Sc.D. Associate Director, School of Hygiene and Public Health, Johns Hopkins University.—The veriest tyro on the road investigates the inside of his flivver or of his car, as the case may be. While few of us are trained mechanics, we, nevertheless, can acquire a working knowledge of the horseless carriage. Similarly, it is quite possible for the layman to find out, with respect to the human machinery (which is more delicate and more wonderful than any other piece of machinery

known), why and how the wheels go around. In fact, one really ought to have a working knowledge sufficiently detailed to know when to call for assistance. It is given in this booklet.

"The Young Child's Health." By Henry L. K. Shaw, M.D.; Clinical Professor, Diseases of Children, Albany Medical College.—That period on life's highway, when a child has ceased to be a baby but is not yet old enough to go to school, is one of the most important from the health standpoint. It is known as the runabout or preschool period and begins when the child is two years of age and ends at six years. This is the time when a firm foundation of health must be laid and when proper health habits must be fostered. The "tiny toddler" is learning and acquiring a rich lore of experience, which will play an important part in later life. The training and guidance the child receives in these early years will go with him through school and adolescent periods, through youth and maturity.

"The Quest for Health; Where It Is and Who Can Help Secure It." By James A. Tobey, M.S.; Administrative Secretary, National Health Council.—Not only should everyone understand the fundamental principles of how to live, but everybody should know where to turn for the right kind of advice on health. The citizen should be acquainted with the government agencies and the other associations which can give him accurate and reliable information about his personal physical welfare. He should be familiar with the factors which can influence his physical life for good or evil. This information is contained in this volume.

"Food for Health's Sake; What to Eat." By Lucy H. Gillett, M.A., Superintendent of Nutrition, Association for Improving the Condition of the Poor.—From the standpoint of nutrition, the greatest dangers to the American dietary lie in possible deficiencies in total food value, in cases of low income, and in certain mineral and vitamin deficiencies which are rather frequently encountered not only in the dietaries of the families where strict economy is necessary, but of those in comfortable circumstances as well. Such deficiencies can, however, be avoided by including in the dietary sufficient amounts of milk in some of its many forms, and of vegetables and fruit. Why this is so, and how it can be done in the planning of the daily meals of the normal family, are told in the

pages of this volume by one who has had a unique experience and success in the work of teaching nutrition directly to home-makers. Opinions will naturally differ as to just how the newer knowledge of nutrition may best be presented in popular form and still preserve its scientific accuracy; but there can be no difference of opinion regarding the importance of the undertaking or the soundness of the general trend of Miss Gillett's argument and advice.

"Taking Care of Your Heart." By T. Stuart Hart, M.D., President, Association for the Prevention and Relief of Heart Disease.—Here we have a real public service, a direct non-technical, practical talk covering the essentials which should be familiar to all of us as a kind of insurance against carelessness and neglect, whether we are in the full tide of health or slowed down a bit by the handicap of leaking valves or a weak muscle of the heart.

#### RICHARDSON: "THE BOOK OF BLANCHE"

The Book of Blanche. By Dorothy Richardson. Boston: Little, Brown & Co. 1924. \$2.00.

This is a very peculiar book in many ways. The story itself is attractive and maintains its interest to the last. The ending, be it said, is not the happy one which is demanded by most novel readers. The scene is laid almost entirely in the hospital, other localities being introduced by way of retrospect, and it is particularly the surgical service of the hospital that is concerned. There are points in medical ethics, there are passages relating to the busy life and the few minutes of leisure of the internes. There is much of psychology; and, of course, the devoted sisters who, nevertheless, have their human traits, also the nurses with all their various peculiarities and characteristics down to the earnest probationer as well as her frivolous and impossible sister—they all pass before us, not in a kaleidoscope (the story is too well ordered for that) but in never-ending succession of events.

There is much that is puzzling and, to some minds, even improbable in the heroine, while the hero both attracts and repels us. Altogether, the story is worth while and one can not but wonder how a young woman like Dorothy Richardson could gain such a keen insight in human nature as she betrays it in the treatment of her subject.



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